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Challenge invites your comments. Address letters to Challenge, 475 Fifth Avenue, New York 17, N. Y.

A dealer's position

•"The Dealer's Dilemma" [January 1957] is a very interesting article; but since CHALLENGE is being distributed as a "public educational and information service," it behooves you to ascertain the complete story. It is obvious that the source of your article was testimony before [Rep. James] Roosevelt's Congressional committee. These hearings certainly did not elicit opinions representative of the 200,000 gasoline service-station dealers throughout the country.

As a gasoline retailer, I and thousands of others like me are free and independent Americans. We are in this business of our own choosing, and are not captives of major oil companies or any other organization.

I do not want to go into all the inaccurate specifics in "The Dealer's Dilemma," but should like to point to one. My supplying company has had a policy of long-term leases for several years now. I know many other major competitive companies who do likewise.

In any industry or profession, there are some who are unsuccessful because of lack of ability. Had you given this matter more serious consideration, you would have realized that your article paints an unduly black picture of the retail petroleum marketer. I cannot believe that this was your intent.

SAMUEL ROSENWASSER
Brooklyn, N. Y.

Reader Rosenwasser is correct. CHALLENGE *did not intend to "paint an unduly black picture." We merely reported the testimony and findings of Rep. Roosevelt's subcommittee of the House Committee on Small Business. The committee drew the picture after two years of study. Scores of dealers from every part of the country appeared before the committee. If they were dissatisfied, they aired their complaints. Those dealers who were satisfied and did not have complaints did not appear before the committee.* CHALLENGE *attempted to point out a problem area on the basis of published findings.—Ed.*

Man and the Economy

•You advised me some time ago that your current series on "Man and the Economy" was to be published in pamphlet or book form. Please advise me when I may order this and what the price will be.

Incidentally, I hope that the reprint will be available generally at a "popular" price. The series has certainly revived my interest and has started me rereading in the

field. I think it would do the same for many others, who may not be subscribers to CHALLENGE. I should also like to see the series, "America 1975" similarly reprinted.

J. C. LEUKHARDT

Washington, D. C.

The manuscript for a full-length book, "Man and the Economy," is now being prepared for the printer. In a few months, upon completion of the series in CHALLENGE, *we hope to be able to announce publication of a "povular-priced" book.—Ed.*

Delighted to have you

•How pleased I am with your magazine. I have received just two issues but expect to be a subscriber for years to come, and I rather think that many others feel the same way.

CURTIS W. MEADOWS

Dallas, Tex.

A world community

•In an interdependent world, sorely beset by maldistribution of natural resources and/or productive capacity, and where but a relatively small segment of modern industrial society has wrested economic freedom from the machine age, it is imperative that democratic world leadership predicate itself on a concept of universal freedom.

The foundation of this universal freedom is self-determination and economic opportunity. This would provide a universal economic base from which to effectively raise, through the application of modern tools of production, science and technology, the relatively low living standards of the overwhelming majority of the world population.

It is the moral duty of those of the world's freedom forces who comprise the more advanced segment of modern industrial society to practice Christian charity and brotherly love in the name of freedom and democracy, and to make democracy effective.

Because man today does not have ideological and political unity and strength, his only alternative is a hopelessly divided world and the extreme insecurity of continued diametrically opposed, war-precipitating international power complexes.

In the last analysis, only a world community united by bonds of ideological and political communion lends itself to the establishment of a democratic world order and a United Nations organization truly representative of the peoples of the world.

OSCAR SANTO

Los Angeles, Calif.

Political and social distress

•Hodding Carter, in his article, "Dawn on the Delta" [February 1957], which describes Mississippi's attempts to pull itself up economically, suggest one of the major reasons for the state's difficulties in industrializing. He cites the exodus of approximately 250,000 Negroes from Mississippi between 1940 and 1950, and says that migration is still continuing today, although at a slower rate.

The reason for this migration is not only the economic distress in which the Negro people find themselves, but also the political and social distress. The social and political repression against a major portion of the people in the state and the turmoil that results has led many a company to seek some other —more trouble-free—area for its factories.

GEORGE DUNCAN

New Orleans, La.

a personal note

from the editor

a standard of living which is on the level

ONE OF THE more overworked terms in the economic jargon, used by economists and noneconomists alike, is "standard of living." We say that the standard of living in the United States is high, the standard of living in China is low, the standard of living of the Joneses is rising, and so on. The marvel of it is that whenever the term is used, no one has difficulty in understanding exactly what is meant—even though in most instances "level of living" would be more correct. There is a difference, and the difference is of earth-shaking proportions. Level of living is applicable to living conditions as they are; standards of living, as people would like them to be.

It is in the American tradition that a man who wants to work and can work will attain an appreciable level of living. And having done that, he can raise his sights on his standard of living. Indeed, the right to aspire to a higher standard of living is as much an individual right in the United States as any of the more formal rights stipulated in the Constitution. Neither social nor political barriers can be universally applied against any individual who manages to raise his level of living. Just as Anglo-Saxon tradition says that an Englishman's home is his castle, so the distinctly American tradition says every man's Chevrolet is his Cadillac. The only thing that keeps a man from attaining the standards he has set is his own lack of ability to raise his level of living.

Moreover, in our kind of society many helpful economic arrangements and inducements will be worked out to help individuals with their aspirations. Buying on time is recognized all over the world as a uniquely American way of doing things. In essence, installment buying is really a great equalizer which cuts down the distance between level of living and standard of living. It makes it possible for most of us to live in the style to which we would like to become accustomed. And while from time to time some economists will question the wisdom

of allowing consumer debt to pile up so high, and while some economic moralists will question the excessive confidence placed in spending and the lack of emphasis on saving, certainly no one would go so far as to suggest that buying on time be eliminated. That would be rashness bordering on self-destruction.

Closing the gap between levels and standards has established other economic patterns in this country. The need to maintain a steady pace of economic growth is a subject of almost everyday conversation around the dinner tables of a surprising number of American families. Every working man and woman has a secret pact with himself that an increase in pay at reasonable intervals is a "must," if interest in the job is to be sustained. The managers of business and industrial enterprises are aware of this attitude, sometimes painfully aware of it, and indeed in their personal and business lives find themselves to be under the same kind of pressure to do better. Efficiency, expansion, raising productivity levels are their everyday goals and standards.

From time to time there are voices in this country which warn us that actual levels of living are moving up so rapidly that many people who had been in the lower income groups will not know what to do with their higher incomes. In other words, it is suggested that the levels of living could outstrip, in some instances, the standards. This is an interesting thought, but we probably are safe in not thinking too much about it. If ever the time should come in this country when some people won't know what to do with their money, there will be many, many others who will certainly come to the fore to show them how money should be spent.

One thing is certain. Only in the United States of America can there be people who will worry about levels of living outstripping standards. Everywhere else, the standards to which people aspire far outstrip the levels. The so-called dynamic Communist states whip their people into believing that there are better days around the crooked corner. Large parts of the globe, undeveloped or underdeveloped, have almost fantastic aspirations. What they want to do is to achieve an industrial revolution overnight, telescope hundreds of years of economic development into compact bundles of economic crash programs crowded into a span of a decade or two. The standards are so high, and the methods to achieve them so costly and precipitous, that often levels of living cannot move up at all, and sometimes drop lower. For those who talk about standards of living, then, it would be well to make certain that what they are talking about is not too far ahead of the level from which they must start.—H. B.

Challenge Notes

The logical French; sauce for the goose; wages and productivity

THE French pride themselves on being a logical people. Indeed, their passion for logical consistency often leads them into difficulties in political and economic matters where letting one's actions be guided solely by logic can be a dangerous business.

The current hassle in the French Assembly over the cost of living index is a case in point. This index is a very important statistic in France, where the minimum wage law and a host of private wage and rent contracts are tied to it under an "escalator" clause agreement. At present, the index hovers around 148.9 (1949=100). When and if the index reaches 149.1, the minimum wage automatically is raised five per cent, other wages rise even higher and many rents may increase by as much as 50 per cent. In addition, wholesale prices on wheat, rye, barley, tobacco and flax, which are also tied to the index, will go up. In other words, should the cost of living index rise by as little as one-fifth of a point, France is in for a serious dose of inflation.

Small wonder then, that the cost of living index has become a key political issue in France. With so much at stake everyone is anxious to have the index behave "just right." Unhappily, there is no agreement about what is "just right." The government is vitally concerned about keeping costs (and, therefore, taxes) down. Farm, labor and landlord groups, on the other hand, naturally want the price, wage and rent boosts which, for equally obvious reasons, consumers, employers and tenants oppose.

Sauce for the goose

THE French experience should be instructive for Americans since "escalator" clauses are coming into increasingly wider use in

this country. So far, it is true, they are used mostly in the wage contracts of a few industries. But, as the French have shown, the principle can be extended, and there are many in the U.S. who think it should be. Surely, they argue, if the automobile workers' income should be protected against the inroads of inflation so should the incomes of other workers. And why, while we are about it, restrict ourselves to the incomes of workers? Bondholders, landlords, professional people—in fact, everyone with a fixed income—suffer from inflation. Why not have their incomes tied to the index?

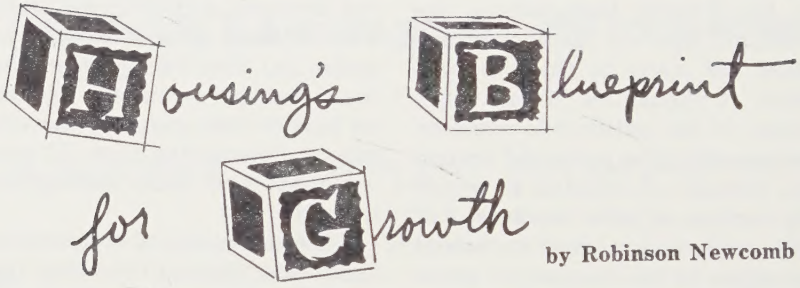
The argument is logical; it is also false—if the experience of the French and others who have tried it means anything. For one thing, statisticians and economists are by no means agreed that the cost of living index actually measures the cost of living. But even if we assume that it does, there is another even more important objection to tying economic contracts to any price index: such automatic adjustments rob the economy of all flexibility. They reinforce inflationary tendencies in periods of inflation, and deflationary tendencies in periods of recession or depression.

Tying wages to productivity

INDEED, this whole business of making automatic economic adjustments to selected indices is fraught with danger. To make prices, wages or credit depend upon one economic concept such as the cost of living or productivity, assumes (a) that we all agree what these concepts mean and (b) that we have devised generally accepted means of measuring them. At present, neither of these assumptions is valid.

Take the concept of productivity. Some labor experts have long suggested that the only way to insure economic growth without inflation, and at the same time assure the worker of a "fair" wage, is to tie wage increases to productivity increases. From a strictly economic point of view, there is a good deal to be said for this.

Unfortunately, economists do not all define the concept of productivity in the same way. The Bureau of Labor Statistics, for example, defines it as output per man-hour. But should this be output per man-hour of production workers, or of workers in all manufacturing, or of all nonagricultural workers? Or should the whole concept of "output per man-hour of work" be broadened by adjusting the man-hour figures for increases in the stock of capital? Until economists agree on the answers to these questions, it is obviously absurd to think of adjusting wages to productivity by any other means than the market.—M. K.



by Robinson Newcomb

The home-building industry has substituted 20th-century power techniques and scientific management for 18th-century handicraft methods

HOUSE-BUILDING is a large industry—as large as the automobile industry—yet it has no large corporate center, or centers, to initiate, plan and direct its operations and to control its financing. Until recently, architects and contractors designed and built homes to the specifications of their customers. They were financed almost entirely by the customer. This practice is in sharp contrast to most other industries which have steadier and broader sources of revenue and credit.

It is well-known what the factors were that shaped house-building into a custom industry, rather than a belt-line operation. The house had to be assembled on a building site, not on a conveyor belt; the demand in any particular community was small and erratic; the construction season was relatively short; the buyer of each house wanted something different, and the materials required were bulky, giving locally produced materials an advantage over materials that would have to be shipped from a distance. The result following from all of these factors meant that demand tended to be too small to make volume fabrication of standard parts feasible. Thus, the entire operation came to center on the final owner, not on the producer.

These and still other factors made it necessary for successful builders to learn how to enter or leave the market quickly, to be able to shift readily from home-building to other types of building, and then back again. This, of course, meant that house-building

remained relatively backward and expensive. Man-hours spent on each unit of output were high. Wages in relation to material costs were very high. Man-hours were held down somewhat by the use of specialists in carpentry, plumbing or painting.

But the possibilities of improving productivity on a crafts basis proved limited. Productivity can most readily be increased when the worker learns how to manage a productive machine, when he becomes a skilled engineer or operator, when intelligence, basic training and machines can be used, rather than manual labor mainly.

The productivity of the house-building industry, therefore, did not rise with that of other industries. Builders could not command engineering and sales research, heavy capital, mass-production techniques or productive labor. About all they could do was try to keep abreast of innovations developed by others which could then be adapted on a small scale.

The growing market of the 1920s enabled some builders to become big enough to experiment on their own, and a few made significant progress. But the situation really began to change in the mid-1930s. As the volume of all construction fell, dropping about 72 per cent in physical terms by 1932, highly trained technicians and professions directed more attention to housing. The Pierce Foundation, for instance, underwrote fundamental engineering, architectural and economic research. Material manufacturers began to promote new ideas. Improvement was immediately apparent. The house of 1940 was better engineered and designed, and built more efficiently than the house of 1930.

By 1940, the best builders had progressed to the point of designing around basic principles instead of merely following tradition. Kitchens were designed around the work and the steps necessary to the preparation of food and the disposal of dishes. The plumbing was studied, both from the standpoint of its use, and of the hydraulic principles which should be reflected in its engineering. Many different types of efficient heating units became available. A buyers' market also stimulated technical, professional and business changes.

It brought major changes in financing, too. Within limits, of course, the larger the chunk of money desired—given equal security and rate of return—the easier it is to borrow. A large profitable company can more easily borrow 100 million dollars at a relatively lower rate of return than a small home buyer with good

Robinson Newcomb is head of Robinson Newcomb Associates, housing consultants.

credit can secure a ten-thousand-dollar mortgage. There is only one borrower to watch in the million-dollar industrial loan. For every million dollars loaned in the home-mortgage field, there might be 100 titles to search, many contractors to investigate, scores of subcontractors to watch, 100 prospective purchasers to investigate and 100 plans and specifications to examine in detail.

The depression forced an improvement in home-financing techniques, to make it safer and easier for home-building to compete in the free market for the credit required by the industry.

Government steps in

The government, under the original sponsorship of President Herbert Hoover, stepped into the breach. The Home Loan Bank Board was set up to borrow in the money markets and to loan to financial associations from coast to coast. A little later, under President Franklin D. Roosevelt, a new agency—the Federal Housing Administration—was set up to insure mortgages. Federal protection to mortgages was extended further after World War II with the guarantee of loans to veterans made in accordance with governmental standards.

The systems are far from perfect, but they enable home-builders and buyers to compete with industrial and commercial users on much better terms than had been possible before 1935. As much as 75 per cent of residential mortgage lending has been handled with the aid of federal institutions, including the Home Loan Bank system, the Veterans Administration and the FHA, and the remainder of the volume is directly affected by the standards set by the governmental agencies.

After World War II another factor entered the situation. The market was so large (1.4 million units were started in 1950), the price so attractive to builders (prices went up 50 per cent from 1945 to 1950), and the financing so safe (with governmental aids and ample funds) that house-building became big business. The Department of Labor reported that in 1949 one-third of all houses started were being built by less than two per cent of all builders, and that about one per cent of all builders were putting up one-fifth of the new homes. Builders who erected five hundred, or one thousand or more units a year became almost commonplace.

Such builders could afford engineering, planning, research and scientific management. Indeed, they could not afford to build in volume without these tools. A saving of one hundred dollars per house on plumbing, for instance, could mean an added profit of

100,000 dollars per year for a thousand-unit operator.

Alert builders moved from the handicraft to the assembly-line technique of building. In contrast to the auto, which is assembled as it moves down the line, these builders learned how to assemble a house by having one operation after another go from house to house. Shovels and trenchers could excavate for one house after another—and at much lower cost than had to be met when a crew dug the cellar and the utility ditches by hand. Forms could be set and used and re-used for one ready-mix concrete-poured job after another. Where codes permitted, plumbing and wiring could be preassembled and set in place quickly. Panels were made with the use of jigs.

Controlled conditions

No one measures the size of the auto wheel, and then shapes a tire, and trims it by hand till it fits the wheel. The wheel and the tire are made under controlled conditions which result in their fitting together. So, too, progressive builders learned to set up controlled conditions for material items which fit together with less and less waste, with fewer and fewer man-hours per finished operation.

This has put pressure on manufacturers. They are being told to provide standard sizes with rather fine tolerances, and to provide the material in finished form. Floors may be bought finished, doors hung, trusses and panels assembled and walls built ready to serve as closets and drawers as well as partitions. Builders are beginning to do what other manufacturers have done for years: set the designs and specifications for their suppliers and make the final erection an assembly job.

Assembly is now done, by the better builders at least, with power tools rather than by handicraft methods. The pieces in the jigs are nailed by power. The trusses, panels, floors, walls and roof are moved by power. The paint is put on by power. The shrubs are placed by power. If the house is brick, the brick can come in panels and be moved to the site by power wheelbarrows. Even the task of laying bricks has been reduced to a science, which makes the brick laying easier for the mason, and faster and cheaper for the builder (and buyer).

The efficient builder today plans his work up to a year in advance, buys or options his land far in advance, and is often responsible for the layout of the entire community. He may even provide land for schools and churches. He makes sure that commercial facilities are available. He builds a community, not just houses.

In one important respect, how-

ever, builders are still far behind other industries. They have not yet learned to create and apply satisfactory market analysis techniques. They do not study the family patterns of their communities in order to learn which families have what incomes for what kind of housing. They do not determine how many families are willing to upgrade their housing within certain down-payment and monthly-payment limits. Techniques are at hand for detailed geographic, price, house and neighborhood requirement analyses in advance of building. Yet, builders still test the market largely by building, until what they are building does not sell.

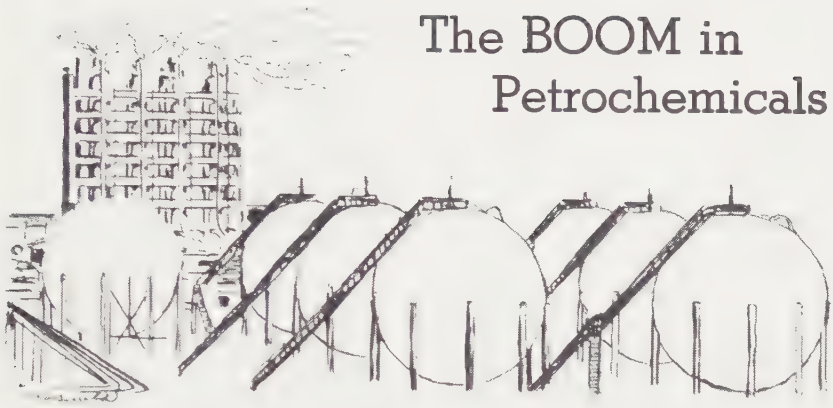
This, as much as mortgage-money trouble, may be responsible for the decline in building which became pronounced in 1956. Until recently, about 65 per cent of the increase in households was occurring in the older families. But that is changing. Within a few years, the increase in the number of middle-aged families—those who want bigger houses for their children—will be only half as large proportionately as it was in 1956, while the proportion of young families will be five times as great. That is a sizable shift in demand which builders are not set up to determine in advance. The process of making the adjustment to this shift is difficult and may encourage pleas for easier financing to stimulate the market.

Financing was a problem in 1956, and will continue to be a problem in 1957. Money shortages last year fell sooner and heavier on housing and on small businesses generally, than on industry as a whole. The FHA and the VA were unable, for administrative or legal reasons, and the Home Loan Bank Board was unable, for policy reasons, to help housing compete equally in the money market in 1956.

But before housing can fully take its place in the advance guard of progressive industry, its marketing and financing tools will need further careful overhauling, and the technical progress that has been made by the large scale builders must be more widely accepted by small builders and by manufacturers and building-material dealers.

The trade association serving home builders—the National Association of Home Builders—is teaching the new techniques with zest and competence. It is ahead of, and not lagging behind, the revolution we are witnessing in the industry. In ten years we can expect home-building to be among the industries which have passed from the handicraft techniques of the 18th century to the power techniques and scientific management of the 20th century. ■

The BOOM in Petrochemicals



The increased use of synthetics speeds the growth of a young industry

THE petrochemicals industry is a chip off a couple of blocks. The offspring of the petroleum and chemical industries, petrochemicals today is rapidly becoming as important to national economic life as its progenitors.

To the average person, petrochemicals is an obscure, mysterious, technical term conveying nothing about the vast array of synthetic products it has lined up in the market place since its inception 32 years ago. Because it is a young industry, few people realize its breadth and its future.

Derived mainly from petroleum and natural gas, petrochemicals are the raw materials out of which come gasoline, plastics, synthetic rubber, synthetic fibers, detergents, fertilizers, pesticides, drugs and hundreds of other commonly used products. Thousands of other uses for petrochemicals have yet to be discovered. When they are—and the rate of discovery is about 400 a year—hosts of new products will be developed, scores of new factories erected and new scope will be added to the growth of America's economy.

Few petrochemicals were manufactured 32 years ago. Today, the petrochemicals industry supplies 25 per cent of the nation's chemicals. In ten years it is expected to contribute 50 per cent. It has quadrupled its plant capacity and sales in the last ten years; in the next five years it plans to double this expansion.

By its ability to wring valuable chemicals from abundant oil and gas resources, the petrochemicals industry has already transformed

the nation s manufacturing processes, products and markets. Even greater changes can be foreseen as the industry continues to explore the world of hydrocarbons.

The story of petrochemicals begins at the refinery, where crude oil is broken down into fractions. Two different refining processes are used in the 337 refineries in the United States: separation and conversion. Distillation, the most common separation process, sorts crude oil into heavy reduced crude, heavy lubricating oil, furnace or diesel oil, kerosene and gasoline.

By being broken down, sorted out, beaten together, combined with other chemicals, twisted, turned inside out and enlarged or diminished under heat and pressure, the hydrocarbon molecules in crude oil are transformed into aliphatics, aromatics and inorganics, the three major categories of chemicals or basic raw materials for other products.

Some of the aliphatic hydrocarbons are ethane, propane and butane and ethylene, propylene and butylene. Some of the aromatics are benzene, toluene and the xylenes. Some inorganics are phosphates, chlorines and caustics. All are obtained by changing the hydrocarbons in a drop of oil and a whiff of gas.

These hydrocarbons were known years before the birth of the petrochemicals industry. They could be obtained from coal tars and some agricultural products such as sugar, corn and oats by laborious and involved methods. The petrochemicals industry obtains and converts the hydrocarbons with simpler, more direct and less expensive methods. Thus, petrochemicals have provided additional raw materials, replacing older sources that were either in short supply or unsuited for transformation to new products.

Polymers and Nylon

The evolution of Nylon is an example. In 1930, Dr. Wallace Carruthers, a fundamental research chemist for the Du Pont Company, told a chemical society meeting of his work in high polymers. (Polymers are certain combinations of hydrocarbons.) Du Pont's applied research chemists took over Carruthers' theoretical findings and tried to figure out what to do with polymers. A team of chemists recognized that a potential fiber existed in some of the polymers, and, four years later, came up with Nylon.

At first, coal tar was used exclusively to provide the raw material for the production of Nylon. A few years later, furfural, derived from materials once dis-

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This article was prepared by the editors of CHALLENGE, who feel that the future of petrochemicals will be even more phenomenal than its past.

carded in the processing of oats, was utilized. Now this synthetic fiber is manufactured almost exclusively from petrochemicals, as are the other major synthetic fibers, Dacron, Acrilan and Orlon.

Price, as much as any other quality, determines how extensively these synthetic fibers will be used. And they are being used more and more as a substitute for natural fibers because the price of the synthetic material is oftentimes less than cotton or wool. In other words, it costs less to produce synthetic fibers than natural fibers.

This lower production cost is the outgrowth of the large-scale, continuous, automated manufacturing process adopted by the petrochemicals industry since its inception. A high rate of production could not have been obtained without automatically controlled production. In many cases, as, for example, catalytic cracking, complicated processes involving steady high temperatures and high pressures would have been impossible without automatic controls. Human operators would be incapable of performing the numerous and intricate tasks required in the exact and swift operation of today's chemical processes.

The average petrochemicals plant consists of miles of pipes and hundreds of tanks through which fluids flow. At a vast number of points, instruments measure and adjust pressure, temperature, flow rate and composition. A central control room receives signals from all parts of the plant system. Changes in all of the important variables such as flow rates, impurities and so on are transmitted to the control room and recorded automatically. This central brain, manned in most cases by a single operator, automatically takes the transmitted signals, weighs them against built-in criteria and decides what needs to be done. The control instruments then send orders back to the servomechanisms which open and close valves and adjust weights, pressures and temperatures.

Automatic controls adapted

The petrochemicals industry availed itself of the experience in automatic controls acquired by the petroleum refining industry. Most of the time, the experience was merely applied by petroleum refiners as they expanded and diversified their manufacturing activities into the petrochemicals field. When chemical companies, such as Union Carbide and Carbon Corporation, began manufacturing petrochemicals, they adapted many of the refining industry's continuous, automatic techniques and mechanisms and introduced some of their own.

The petrochemicals industry is

a closely knit family of giant petroleum and chemical companies, but, in recent years, it has been drawing unrelated companies into its house. Today, the family consists of 197 companies, all of them the pillars of the nation's industrial society. Companies like Esso, Shell, Texaco, Gulf, Phillips and Cities Service with their vast oil resources and 40-million-dollar refining plants are among the patriarchs of the family.

Monsanto Chemical Company, with its wholly owned Lion Oil Company, and the Jefferson Chemical Company, owned jointly by American Cyanamid Company and Texaco, illustrate the characteristic unions in the field. The U. S. Rubber Company associated with Texaco in the Texas-U. S. Chemical Company, and B. F. Goodrich (rubber) Company and Gulf united in the Goodrich-Gulf Chemical Company represent other happy, and logical, marriages into the family.

Drop in a test tube

For the last five years, entirely unrelated companies seeking to diversify their products have been entering the field. Among them have been the shipping firm of W. R. Grace and Company, farm equipment manufacturers, and gas pipeline firms.

All 197 companies have invested four billion dollars to build, equip and operate 362 petrochemicals plants in the United States and Canada. In relation to the rest of the chemical industry with its 12,000 plants scattered around the country, the petrochemicals industry's facilities may appear to be a drop in a test tube. But these petrochemicals plants produced 35 billion pounds of raw materials last year, 25 per cent of the nation's chemical output, with a value of 4.1 billion dollars, over 50 per cent of the total value of all chemicals sold.

Last year, petrochemicals firms invested one billion dollars to expand their plants and build new ones, a necessity in an industry where new manufacturing processes are being constantly evolved to produce newly discovered hydrocarbon combinations. This investment is apart from continuing expenditures of hundreds of millions of dollars for research.

Research in the past led to the present expansion program by generating new products, new industries and called upon the industry to produce more petrochemicals. John A. Field, vice-president of Carbide and Carbon Chemicals Company, one of the leaders in the petrochemicals industry, explained that "for every dollar spent for research, development and other experimental costs, new sales of at least $5.60 result after five years."

It happened in the case of poly-

ethylene plastics which were unknown to the average consumer ten years ago. Today this tough resin is used in squeeze bottles, noiseless garbage cans and other housewares, electrical insulation, toys and a myriad of other products. Last year, production of polyethylene plastics was 542 million pounds, an amount exceeded by only two other synthetic materials used in the rapidly growing plastics industry.

Other new industries have been generated in the same way. The aerosol bomb industry owes its existence to a propellent produced by the petrochemicals industry. In 1955, close to 250 million aerosol bombs used to splurt shaving cream and stifle mosquitoes were produced and marketed. By 1960, industry experts expect to see 750 million such bombs manufactured.

Older industries—rubber, paint and drugs—have received a shot in the arm from petrochemicals. A fifth of all petrochemicals produced in the nation now goes into the manufacturing of synthetic rubber, and the nation no longer is entirely dependent upon natural rubber for automobile tires, industrial belts and rubber bands. Paints have been improved by the addition of petrochemicals which provide quick-drying, long-lasting qualities. And the drug industry has been spreading tranquility through the nation with its new tranquilizing drugs, Miltown and Equanil, both derived entirely from petrochemicals.

There is hardly an industry in the country that has not been affected by the advance of petrochemicals. As a matter of fact, there is hardly an area of human life that has not been touched by them. In the food industry, petrochemicals supply fertilizer, pesticides and additives used in processing plastics for packaging. In transportation, all the gasoline used in autos and trucks is a blend of various petroleum hydrocarbons. In the home, in clothing, in recreation, in health, petrochemicals are leaving an ever-widening imprint.

And there is more to come. According to R. L. Bateman, Director of Product Development of Carbide and Carbon Chemicals Company, the applied chemists have not yet caught up with the fundamental chemical researchers. They have not figured out how to use all the petrochemicals compounds already catalogued. When they do, we may see extremely durable plastics, for example, replacing metals used in automobiles, in housing and heavy construction. We may see more rust-proof plastic piping used in the home, on the farm and in industry. The potential of petrochemicals is as unlimited as the world of hydrocarbons. ■

AMERICA 1975

SERIES

Production—Key To Rising Income

By 1975 the requirements of a growing economy can provide for the useful application of a supply of goods and services double the present level

by Gerhard Colm

If RECENT trends in productivity and in the attitudes of business, labor and the consumer continue, total production of goods and services in the United States in 1975—at present-day prices—should be about double what they were in 1956. In other words, by 1975 our gross national product should be more than 800 billion dollars.

Some people might wonder what use we shall make of double the amount of food, cigarettes, automobiles, houses, and so on. Disciples of Henry Thoreau may question whether such an increase in output will actually add to our cultural achievements and happiness. It is for the philosopher rather than the economist to appraise the material and spiritual aspirations of individuals and groups. But our philosopher should know that it is not at all fantastic to predict that by 1975 the doubling of GNP will bring us to the verge of the abolition of poverty.

We must keep in mind, however, that the doubling of production over the next 20 years will be shared among more people, more producers and more consumers. The per capita share will not double; but it will increase approximately by 50 per cent.

It is not by chance that this article started with an "if." All economic projections are exercises in hypothetical computation. Some of our assumptions are of a relatively solid nature; others are more uncertain.

Relatively certain are the projections of the population from which the labor force will be derived because most of those who will be in the labor force ten or even 20 years hence are already

born. Somewhat more uncertain is the so-called labor force participation rate—that is, the percentage of the population in the various age classes who will be able and willing to work. More adequate old-age pensions will make for an earlier average retirement age, while the advances in geriatrics will permit longer years of productive life. It appears particularly likely (and desirable) that provisions will be made for part-time employment of older people.

Much uncertainty exists about future hours of work. The trend towards a shorter work week and longer vacations will continue. The question is: How rapid will this be? In our projection we shall make two alternative assumptions with respect to the decline in average hours of work during the 1965-1975 decade. There will either be a gradual reduction in the work week in accordance with an increase in productivity in line with past experience; or there will be a sharper reduction in the work week and a somewhat steeper rise in productivity than recently experienced. The latter assumption appears more probable, if the advances in techniques of production and business management are fully utilized. Also, advances in management-labor relations could result in increasing productivity.

On the other hand, there are factors which might retard the rise in productivity. As industrialization develops all over the world, the demands on available raw material resources will grow. It may, therefore, become necessary to utilize lower grade, and more remotely located, raw materials which require higher costs of processing and higher costs of transportation. A growing density of population and more demanding standards of safety will necessitate rising costs to combat air pollution, to improve working conditions, and so on. In spite of these and related tendencies, it appears that, as a minimum, continuation of recent trends in productivity should be assumed.

Once the rise of the labor force, the average hours of work, and average productivity (that is, output per man-hour) have been estimated, it is possible to compute potential production under conditions of full employment. But will we necessarily have full employment in 1965, in 1975, or in any other specific year? Here we are making a final, rather arbitrary assumption. Our projections will assume a rate of unemployment at four per cent of the civilian labor force. This is a higher rate of unemployment than we have had in recent years, but a rate which still is generally regarded as compatible

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with full employment conditions. Making this assumption does not exclude the possibility that 1975 may be a year with higher or lower than four percent unemployment. That is why our estimates are called projections of goals rather than predictions.

Realistic estimates

Nevertheless, these estimates have a realistic value in spite of their hypothetical character. The federal government is obligated under the Employment Act of 1946, and also by sheer political necessity, to use all available means to promote economic growth and combat depressions. A projection assuming approximately full employment reflects the conviction that economic policy undertaken with the cooperation of business, labor, and the public in general can and will succeed.

Before we undertake to speculate about the ways in which the 800 billion dollars of production per year may be used in 1975, it will be useful to see what happened to the increase in production which occurred from 1929 to 1955. During those 26 years, production rose about as much as we expect it to rise during the next 20 years—that is, a bit more than 100 per cent. Personal incomes (measured in 1955 prices) went up by more than 170 billion dollars. Labor incomes increased by 138 billion dollars, accounting for 80 per cent of the total rise in personal income. In addition, wages and salaries per employee —in spite of 16 million more in the work force—increased over the period by more than 60 per cent. That increase over a 26-year period corresponds to an average rise of about two per cent per year. The balance of the increase in total personal income, 32 billion dollars, is explained by the rise in the income of farm and business proprietors, in dividends, interest, transfer payments, etc.

Let us now go from the income to the expenditure side of the national account. Disposable personal income (i.e. personal income after personal taxes) increased by about 141 billion dollars; consumer expenditures by 128 billion dollars. On the basis of these data, we might hypothesize that of the total increase in personal consumption, 35 per cent is accounted for as a result of the rise in the number of employees; 55 per cent as a result of the increase in real wages; and ten per cent as a result of the additional consumption by farmers, businessmen and other self-employed.

The statistics show that 3.6 per cent of the total increase in the gross national product went into greater expenditures for residential construction. Houses had to be built for a population which

was increasing by about 1.3 million persons in 1929, and 2.7 million in 1955. In addition, there were improvements in the standards of housing, particularly for people in the middle-income brackets. Of the total increase in the GNP, 7.5 per cent went for business investments in plant and equipment and 27.7 per cent for Government purchases of goods and services, particularly for national defense.

With the experience of these developments as a guide, we shall now speculate how a future rise in total production might be utilized. Our projection implies an estimated increase in the employed labor force of 24 million. Assuming that wage and salary workers grow in the same proportion as the total employed labor force, and assuming that 85 per cent of the additional labor income will be spent on consumer goods and services, we estimate that by 1975 roughly 65 billion dollars would be needed to satisfy the demand for consumption by the additional work force. This is without any allowance for increase in wage rates.

Wages and salaries

Now, let us assume that wages and salaries per employee will continue to rise by two per cent per year and that of this increase (because of stiffer taxes and a rising rate of pension and other saving plans) 80 per cent will be spent on consumer goods. This would give us additional consumption of approximately 120 billion dollars. If the level of consumption of the self-employed and the amount of income devoted to consumption out of dividends, interest, and so on should rise in the same proportion, they would account for an additional 105 billion dollars in consumption. These three items above would give us an increase in consumption of 290 billion dollars, or approximately 73 per cent of the total 400-billion-dollar increase envisaged in GNP.

Just as the 400-billion-dollar economy of 1955 needed more investment in plant and equipment than the 200-billion-dollar economy of 1929, so an 800-billion-dollar economy of 1975 also needs more investment in plant and equipment than the economy of 1955. The addition of 50 billion dollars to the annual rate of business investment, therefore, does not appear unreasonable in the perspective of the total increase in national output. The increase in expenditures for consumption, housing and business investments, the high level of production and a moderately rising rate of wages and other incomes would thus account for roughly 345 billion dollars, or 86 per cent of the total potential increase in GNP. This

would leave about 55 billion dollars, or 14 per cent of the total increase in GNP for additional annual government expenditures and net foreign investments.

This computation suggests an interesting answer to the question of how the tremendous increase in supply of goods and services might be utilized. *Most of the increase in the supply of goods is likely to be used by those in business and labor who produce the additional goods.*

It is difficult to engage in any meaningful speculation about the future requirements for government expenditures, especially for national security. Let us assume —and this is an arbitrary assumption, indeed—that we shall need by 1975 about the same amount for national defense as we are spending today. As to the *nondefense* functions of government, statements can be made with somewhat greater conviction about goals and objectives. It will be necessary to increase expenditures for schools, medical facilities and services (including mental health), water supply, roads, recreational facilities, and so on, not only in proportion to the increase in population but probably at a somewhat faster pace. Also, for net foreign investment—private or public—it is possible that the United States would invest abroad amounts in excess of the interest received from previous lending.

It is not too difficult, then, to see that the needs of consumers and business in a high-level, growing economy can provide for the useful application of a supply of goods and services double the present level. If there is any potential surplus production, the tremendous needs in the public sector and the growing opportunities for foreign investments will present ample outlets. If peace can be maintained, we shall, in the United States, be at the threshold of an age of abundance in which poverty as a general phenomenon can be conquered, and in which the United States can make a significant contribution to the conquest of poverty in other lands. We need not fear that with such a potential abundance of goods, further production efforts are meaningless.

When Henry Thoreau wrote that Walden Pond offered him everything he needed, the United States had a population of about 23 million. In 1975 we expect a population almost ten times as large. To provide a reasonable degree of comfort for more than 220 million people requires a large and growing amount of production. Emphasizing the need for material goods is not materialistic as long as we recognize that production is not an end in itself but is useful only in support of a dignified life for a free people.■

How the Money Will Be Spent

Consumer outlays will increase in the areas of education, transportation, water supply, power and entertainment

AMERICA 1975 SERIES

by Victor Lebow

THE CONSUMPTION of both goods and services in the United States reflects a variety of pressures, of which actual need is probably the least. Undoubtedly food and shelter are basic necessities; but frozen dinners and split-level houses are not. Survival could be assured less extravagantly.

If we are to try to project into 1975 the spending patterns of the American consumer, we should be concerned with projecting first the characteristics of American consumption. Before we can do that, however, we must clear some of the economic underbrush with a series of assumptions.

We must assume, first, that whatever economic recessions the United States may have during the next 20 years, none of them will be as catastrophic as the depression of the early 1930s. We must assume, also, that there will be no large-scale wars during this period. We shall take it for granted that the benefits of the "welfare state" will be continued and probably enlarged, and that we shall attain such a high level of productivity and automation that a much shorter work week and far more leisure time will result.

We must work on the premise that our capitalistic system will continue, but that it probably will be less competitive in nature because of the increasing concentration of industry and of channels of distribution.

We can expect that the American consumer of 1975 will be running just as hard to keep up with the Joneses as he does in 1957. Since we shall be no nearer to an egalitarian society than we are today, factors of status and prestige will continue to operate.

There is little in the perspective for the next 20 years to suggest any greater independence of thought or any lessened drive toward conformity than we have today.

If anything, people in 1975 will be more plagued with cults and fads than they are today. With our production of an overwhelming flood of commodities and services, the American of 1975 will have to consume at a pace commensurate with the output. He will, therefore, be even more likely than he is today to regard his patterns of consumption as the principal characteristic of his way of life.

Because the "dormitory suburbs" will have become large cities themselves by 1975, consumers will be seeking recreation and sport more intensively than today; and with so much more time on their hands, the more affluent will be traveling farther to find surcease from the cares of the everyday world.

Multiple facilities

At the same time, there will undoubtedly be a huge multiplication of such community facilities as swimming pools, recreation centers, tennis courts and other sports areas. This will mean that the apartment house dweller will be seeking space in a house equipped with these facilities, and the homebuilder will require them as part of his daily life as well. It would seem to follow that a larger slice of the consumer's spendable income will go into clothing, equipment and construction, as well as into means of transportation.

By 1975 the processing of food, and the means of preserving it through irradiation and other techniques, will have reached such a point that home preparation of foods will be minimal. It may well be that a truck making a home delivery will leave at the door a carton containing the entire week's menu, all prepared and ready for heating and serving. We have already seen the dollar value of food rise, not because the amount consumed his risen, but because of additional processing costs. It should follow, therefore, that the feeding of the American family in 1975 will take a considerably larger proportion of the consumer's budget than it does today. For, not only will more foods be processed and delivered in ready-to-eat form, but delivery costs will also probably be higher.

By 1975 certain major appliances which are today purchased separately by the consumer will be essential fixtures in every modern home, and probably built in. Thus, the television screen, the refrigerator, washing machine, dish-wash-

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er, heating units for food and air-conditioning equipment for the entire home will be standard equipment for both apartment houses and individual homes.

In order to maintain both the construction and appliance industries at a high level, there will have to be an intensification of obsolescence in homes. By 1975 the American of moderate and higher incomes should be living in a new home every three or four years. Rent, or its equivalent, will take a larger share of the budget.

Since we shall be living in an age of speedy and lower-cost transportation, travel will be far more general than it is today, and it is not impossible to envisage faraway areas of the world serving as vacation spots for Americans.

A large population, the multiplicity of cities and the transportation required to supply the population and its industries will crowd the roads of 1975. Networks of fast transportation will be developed to relieve some of this pressure, but one result will be a decline in the use of personal transportation. The private passenger car will play a smaller role in the life of 1975. Between the crowding of highways and the amount of arable land taken out of cultivation by the roads, a limitation of both the number and use of automobiles will be necessary.

By that time electronic means of communication will be developed to such a point that schooling will have been reduced to a few teachers serving all of the schools of the country from some central point. Thus, a child who is moved from one community to another will be able to pick up his lesson from one day to the next just as if he had stayed on in the town from which his family moved. As for higher education, most of it, by that time, will be in the hands of the federal and state governments. The necessity of producing a large and technically trained population will force the government to make education free to all who qualify. This will be dictated especially because of increased competition from the Soviets.

The predominance of visual and auditory means of communication will probably lead to a decline in newspapers, magazines and books. Reading will not be the avocation of an overwhelming majority of people; it will be necessary only for those involved in research and special technical preparation.

Comforts and conveniences

The need for spiritual values will not be wholly satisfied by the material comforts and conveniences of 1975. We can foresee an enormous growth in religious organizations. Whereas the Amer-

ican of 1957 is spending perhaps one-half of one per cent of his income for the support of religious institutions, in 1975 he will probably be spending three to five per cent of his annual income to support religious activities.

These projections tend to emphasize the buying of services as against commodities. It would appear that the equalization of incomes which higher taxation and other measures will produce, will strengthen the drive to differentiate the individual through competitive and compulsive consumption.

Since continued prosperity will depend upon the highest possible level of consumption, both the incentive for and the need to save will be lessened. The variety of welfare services will provide a maximum of security. The unemployed, who thereby have a reduced capacity to consume, will thus represent a threat to the stability of the state. Therefore, whether it takes the form of "made" work or compulsory assignment to jobs, unemployment will not be tolerated. This policy will tend to level incomes considerably, but they will have to be maintained at a rate that will permit the acquisition and destruction of as many goods and services as the economy can provide.

All of the foregoing is based on a premise that may be untenable —namely, that the United States will remain a closed universe, economically and sociologically very much as it is today. With all our lip-service to the international viewpoint, Americans are still, in 1957, the chief beneficiaries of our

Spending: 1956

PERSONAL CONSUMPTION expenditures in 1956 totaled 266 billion dollars, an increase of 12 billion dollars, or 4.5 per cent above 1955 and 29 billion dollars higher than 1954. The expansion, according to the *Survey of Current Business* of the Department of Commerce, was a reflection partly of higher prices and partly of an increase in consumption stemming from the rise in disposable personal income, up 16 billion dollars since 1955.

While people spent more, they also saved more and cut the amount of their installment debt outstanding. What money they spent went more for nondurable goods and services than for durable goods. They spent 2.5 billion dollars less on automobiles than in 1955. Household furniture and equipment held their own. Spending for nondurables was 6.5 billion dollars, or five per cent above 1955 levels, with outlays for food and clothing accounting for most of the increase. This increase resulted from a greater amount of food consumed and clothing purchased; it was *not* a reflection of advances in food prices.

resources and our productive system. Were this to be true in 1975, we would have reached the *panem et circenses* stage of our national life story, which, economically speaking, stresses services above products.

Comfortable austerity

But the world-shaking changes triggered by World War II have precipitated a chain reaction, and the end is not yet in sight. Therefore, we must consider an entirely different possibility for America of 1975. The transition of colonies to national states, the use of economic planning by these new states, the emergence of socialist economies in new regions of the earth—all these will affect the United States in the years ahead. The race between the Soviet Union and the United States for the peoples in the far reaches of the world will undoubtedly continue. And it will claim heavy payments, not only in the form of trained personnel and productive machinery, but also of products. We saw, during World War II, that Americans could live better, eat better and clothe themselves more than adequately even with more than half of our productive facilities turned to the manufacture of armaments. But at the same time, we cut off the automobile, the refrigerator, the washing machine and even the new home during the war years. There is, therefore, the possibility of a species of comfortable austerity for the American of 1975, which will permit this nation to build roads, factories and machinery for whole continents as well as to extend technical aid.

In any event, such a course of events would entail heavy taxation and a multitude of services planned, controlled and allotted by the government. In short, the competition between the capitalist and socialist sectors of the world will tend to raise the standards of living of backward and underprivileged peoples very rapidly, and slow down the progress of those of the highly industrialized countries.

In the United States, this constant and heavy drain upon our resources could diminish our supplies of oil and minerals, lower our water table and turn into desert huge sections which are today arable, thus further restricting our productive capacity.

Whichever road we take, the America of 1975 will clearly be one in which survival for the individual will depend more on the services the consumer will have to buy —whether they come from monopolized industries or from government—than is true today. These services will be in the realms of education, transportation, water supply, power, entertainment and quite possibly recreation. ■

What America Means to Me

WHAT IS AMERICA? Ask one hundred different Americans this question and you will get one hundred different answers. This is mine.

I work in overalls. My father was a mountain circuit rider. He lived on the bounty of his parishioners and shipped out poor, but happy, before the age of plenty. I had just turned 21. I chose a railroad machine shop in which to earn my bread. I still don't know why, for I had the choice of becoming a machinist, farmer, teacher, or businessman. America gave me the right to choose.

As a railroad worker, my family and I are protected by a company-financed medical plan and a pension plan to which the company and I contribute on a fifty-fifty basis. I am paid for seven holidays and a three-week vacation. I will be paid half wages for 26 weeks if I am ever sick or furloughed. I own my home, mortgage free, paid for over the years with my daily wages. And nobody, not even the President of the United States, his Cabinet or Congress can move me from it. America gives me protection and security.

I sent my boy to a college of his own choosing to learn a profession he selected and to work for a company of his own preference. America is a place where the city-bred youth of the East can climb over the Rockies to romance and opportunity, and the unfenced youth of the West can scale the heights of finance and industry on Manhattan Island.

I have invested what little money I have been able to save over and above my living expenses. I could have invested in General Motors stock, or Coca-Cola, or the C & O Railroad. But I chose to invest in United States Savings Bonds. America is *the* place where the man in overalls and the millionaire can own stock in the same company, and each will be rewarded at the same rate per share.

I live in a small town where everybody knows everybody else. America is filled with small towns and Main Streets, and big cities and glittering Broadways. We are all laced together by a network of railroads and thousands of miles of highways. We visit with each

other, and know each other. America is an open, friendly country.

I contribute to community fund drives every year. Americans open their hearts to the unfortunate at home and to the persecuted abroad. We are hosts to thousands of friendless strangers; we take on the responsibility of caring for our own. America is hospitality and generosity.

I go to a small church. I worship as often, or as seldom, as I please. It is my right, it is the right of all people to worship in a church of their own choosing. We are a land in which people believe in individual rights. We protect those rights for all individuals, no matter what their beliefs, their creed or color. America is liberty and freedom.

I don't like war. All Americans abhor war. Yet we will fight to defend ourselves. We are powerful, with thousands of warplanes and warships always ready and able to defend our land. The old saw of "rich man's war; poor man's fight" hasn't taken hold here. America is everybody's fight.

I am an individual acting for myself and shaping my own destiny. But I work together with others for our collective benefit. We are a nation of individuals, and a nation of groups and associations. We are Kiwanis and Chambers of Commerce and American Federations of Labor and PTA's. America is individuality and unity.

I draw strength and power from the machines I use. I create more strength and power with my production. I help add to the wealth of the nation, and I draw from this wealth. America is a creative force to me.

I am sustained and strengthened by my moral and spiritual principles. I add strength to the moral and spiritual principles that guide the life and progress of the nation. Without these principles I am a half-grown man, and the nation a half-grown nation. With them, we are all more mature and considerate, seeking the common good. America is moving toward that good.

Some of my fellows in the machine shop are pessimistic sometimes, and so am I, what with our personal difficulties, local problems and the state of the world. But we never stop rejoicing over the fact that we live in America. America belongs to each of us whatever our station in life. America belongs to me.—FRANK BALL

The drought which exists today in the High Plains is one of the greatest natural—and economic—disasters the United States has ever faced

Plague on the Plains

by Barrow Lyons

Most of us know that a serious drought exists today in the High Plains area of the United States, but comparatively few realize that it has become one of the greatest natural disasters this country has ever faced.

More money is being spent today for drought relief than during the Dust Bowl days of the 1930s. According to information compiled for President Eisenhower on his January visit to the stricken area, 315.7 million dollars has been spent in six states alone from July 1954 through November 1956.

Weather experts say that this drought is the worst within the memory of living man, probably the eighth most severe in six centuries. Live oaks that had survived in the Southwest for centuries have withered at the roots. Suffering extends from the plains of Texas to those of North Dakota, from the edge of the Rockies as far east as Des Moines.

Adequate rain might come tomorrow—or not for several years. But today more than half the land surface of the continental United States, some 1.7 million square miles in 26 states, has been affected. Many streams, lakes and reservoirs have become dry in a third of this area.

No one has estimated the full extent of the economic damage. There are only some scattered data. Last year cotton yields in the Texas drought region were about one-fifth of normal. Officials estimate that in the last five years drought has cost the farmers and ranchers of Texas 2.7 billion dollars. Wells in Kansas and Missouri, which held up during the drought of the 1930s, have gone

dry, and dairy herds have been decimated. On the High Plains many small stockmen have sold off their breeding herds because they could find neither feed nor water for them. Over the entire 26-state area, the losses from drought are undoubtedly greater. And losses do not stop with the man on the land; they spread in ever-widening economic circles.

Were it not for the high industrial production of the nation, the drought could have triggered a depression. Indeed, that is still not an impossibility, for the end is not in sight. Some long-range weather forecasters say that rain will come in April. Others, basing their estimates upon a study of the cycles of solar radiation, think that the drought will last for several more years.

But it is not the weather so much as the ignorance and shortsightedness of man that are the primary causes of economic disaster in the 26-state area. In the days of the Indian, the High Plains region of the U.S. was almost wholly open grassland over which vast herds of buffalo roamed. Droughts have always struck it and withered the grasses; but the 60-to-70-mile-an-hour winds that sprang up in hot weather did not kill the grass roots. The turf remained. Many buffalo died; others found pasture in the mountain meadows. But the millions of buffalo did not destroy the plant cover that holds down the topsoil. And such dust storms as occurred on the plains probably were not nearly as severe as the "black rollers" that blotted out the sun in the 1930s and again today.

Man discovered that he could grow wheat, cotton and corn on the High Plains during the years of plentiful moisture—and he did. Millions of acres were broken to the plow that should have remained in permanent pasture. When the dry years came in the 1930s, the soil for the first time in history was ready to blow extensively. By the time the rains came again, the clouds of war were also gathering, and the United States girded itself to defeat the most powerful armies that men had ever raised. In World War II we approached total mobilization of our resources and provided food for a much greater population than our own. Grains and meats brought high prices, and it became exceedingly profitable to farm many areas of the High Plains, even though the soil was poor, and to crowd the ranges with cattle.

Some farmers had learned their lesson in the 1930s. They knew that dry years would come again and practiced conservation farm-

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ing. Most of these have suffered less in the present drought because of their discretion; but some have had their fields overlaid with sand and dust blown from the scarred acres of the heedless.

"Suitcase farmers"

There was also a plague of "suitcase farmers." A man living in a city could buy land, and, if he knew how to operate a tractor, could spend not more than six weeks a year on the farm. He would plow and sow in the fall and harvest in the summer, and make a lot of money during the wet years. In the 1940s, on one thousand acres of fairly good plains land, a yearly net profit of 40,000 dollars was not at all unusual. A man could reasonably figure on at least four good years in the early and mid-1940s. It didn't matter to the "suitcaser" whether the whole farm blew away. He'd taken his profits.

By 1948 topsoil was blowing from five million acres. Then the area of blow lessened and then climbed in 1953 to more than 13 million acres damaged by wind. That was for the Southern Great Plains only—parts of Kansas, Colorado, Texas, New Mexico and Oklahoma.

In 1954, the Soil Conservation Service began to compile figures for the Northern Great Plains also—parts of Montana, Nebraska, North Dakota, South Dakota and Wyoming. In that year, and also in 1955, more than 16 million acres were damaged by blowing in all of the plains states. Timely spring rains held down the damage last year.

This year, unless rains come very soon, more topsoil than ever before probably will go to the wind. Today there are more than 30 million acres of the High Plains ready to blow, ten million more than last year at the same time.

The great danger to the nation is that once the topsoil has been blown in depth from the land, it may never be replaced. In some areas as much as ten feet of soil has vanished. It may be impossible ever to grow grass on that land again, and it is certainly unprofitable already. Parts of the Dust Bowl area have become desert wastes; and these areas tend to spread with every drought, because the blowing sands roll outward, covering good land and poor.

Yet the High Plains normally produce more than half the wheat and about one-third of the beef that Americans eat. Only when this is realized does the stake of every citizen in the preservation of the soil of this area become obvious. Without proper land use the danger that an important part of the United States eventually will become another Sahara Desert

multiplies with each recurring drought cycle.

The economic problem is the simplest to understand. An example: back in 1945, the Soil Conservation Service agent at Springfield, Colorado, now in the heart of the Dust Bowl, was sitting on nearly a quarter of a million acres of land that the federal government had purchased and seeded to grass because it should never be plowed. It was not good land; but in 1945 rains were plentiful and it could have been leased or sold to wheat farmers who were plowing up the plains all around and making a killing. The land had been purchased at an average of $1.65 an acre. Now land in the area was worth around 40 dollars an acre.

Monument to courage

Most uncomfortable pressures upon the government to permit wheat farming on that protected pasture developed in the county and all along the line to Washington, D.C. People would hardly speak to the SCS agent, unless it was to revile him and the government. He feared to go to town to shop lest he would get into a fight not of his own choosing. Yet, today, the 250 thousand acres stand as a monument to his and the government's courage.

Another example: in a certain county in northern Texas there is a vast cattle ranch. There still is grass on the big ranch side of the fence. Beyond the fence, on land occupied by smaller ranchers, there is little grass, and the land is blowing. The small ranchers, many of whom lease their farms, had stocked their pastures to the limit and overgrazed the sod. Seven years of drought have made considerable progress in turning the land into a permanent desert. Too often the small rancher cannot afford to use his land in a manner that will preserve it, especially when the price of cattle declines, as it has. Moreover, he often is not as well informed as the big rancher regarding the long-range reasons for good land management.

But the problem is not entirely economic. Example: the state of Colorado has land-use laws which, if enforced, would protect the land. To implement them it appropriated one million dollars. Under the law the county commissioners can go onto a man's land and give his crop acres emergency tillage when the soil is threatened with blowing. Yet the state has used only 18 thousand dollars for such purposes. Why? The ranchers deeply resent government interference—telling them how to farm is bad enough, but doing it for them perforce is intolerable.

"Laws to enforce good land use are like prohibition laws," ex-

plains Fred M. Betz, Administrative Assistant to Senator John Carroll (D.-Colo.). "You can't enforce laws when the people don't want them enforced."

Further, real estate interests in Colorado have been against good land-use laws for years because their profits are cut. They have brought enough pressure on the state government to weaken enforcement of these laws.

Senator Carroll believes, nevertheless, that the people of the plains area can be educated to solve their own problems; that when leading citizens are organized to bring about better land use, publicity and local social pressures will induce others to follow sound practices.

Education can do wonders. In the Dalhart area of the Texas Panhandle, which is one of the worst wind-whipped spots of the West, the plains raven was known to build his nest of wire picked up from the farmsteads, because he could find no vegetable material during the drought of the 1930s. Under the leadership of Dr. Hugh H. Bennett, first head of the SCS, the Dalhart people learned how to save their soil.

They leveled the dunes, adopted contour plowing, planted the fields to sorghums and grass. Today these farms are in much better shape than those where conservation practices were neglected, or land plowed up. The Dalhart area, according to Dr. Bennett, now stands out like an oasis in the midst of drought and want. It is a place, he feels, where plains farmers can go for conservation information and renewed hope. But there are many other places where very substantial progress has been made since the 1930s, when the critical area was much smaller than today, although not less hard hit. Among others, such areas as those around Liberal, Kansas, or Guymon, Oklahoma, or Springfield, Colorado, could be mentioned.

"These areas," Dr. Bennett said, "give me faith to predict a successful outcome of the new battle that apparently is to be fought to a finish."

The Department of Agriculture has drafted an extensive program to rehabilitate the High Plains area with the financial cooperation of the states and local governmental units. It covers both relief and long-range educational efforts. It brings into the program all agencies that can contribute.

But this program never will be effectively carried out until the nation is aroused and understands its stake in preserving our sources of grain and meat, and until Congress, state, county and municipal governments are ready to spend the enormous sums that will be required. ■

DISCRIMINATION AND DOLLARS

According to reliable estimates, racial discrimination in the United States represents an annual loss to the economy of some 30 billion dollars

by Richard Lee, Jr.

EVER SINCE the first group of Negro slaves was brought ashore in colonial Virginia early in the 17th century, Americans have been wracked by debate over the moral implications in the concept that all men are equal, except when some are colored. Yet, despite the 300-year-old preoccupation with the moral issues raised by discrimination, it is only in the past decade that we have commenced to perceive dimly its startling economic consequences.

For an economy as dedicated to the virtues and necessity of constant expansion as is ours, it is hard to explain why we have so tardily turned our attention to the effect of this social aberration upon our continued growth. Unless we have become so anesthetized to the sound of large figures that an annual loss of 30 to 35 billion dollars has become meaningless, we can no longer ignore its dangers. Such was the cost of racial discrimination as estimated recently by Elmo Roper, the public opinion and research analyst, after measuring the losses attributable to discrimination in terms of labor waste, productivity loss, reduced tax revenues and the cost of maintaining various systems of racial segregation.

Nor, in the light of today's tightly stretched manpower supply, can we continue to deal with the problem in a spasmodic or fatalistic fashion. Many projections of our rate of industrial growth in the next 20 years have been recently advanced, but each has emphasized that the fulfillment of these possibilities depends in large measure upon our ability to develop a vastly increased force of skilled labor. Obviously, these goals can never be

achieved while more than one-tenth of our population is still stationed on the fringes of our economy.

A major obstacle to reasonable discussion of the problems raised by racial discrimination is a tendency by many persons to use the words prejudice and discrimination interchangeably. Only a relentless optimist can foresee an age when the human mind will have rid itself of prejudice, and from this premise it is often argued erroneously that nothing can be done about discrimination. Prejudice is something which every individual must cope with inside his own mind, but the act of imposing differential treatment upon persons because of their color or religion is something which is within the power of society to eradicate.

Myth and fallacy

No phase of American life has been more distorted by myth and fallacy—by proponents on both sides of the argument—than racial discrimination, particularly in our attitude towards the Negro. One popular myth, frequently disseminated with some passion in the North, is that discrimination is a regional problem peculiar to the South alone. Implanted in the northern psyche in Reconstruction days, it is an idea which has proven remarkably impervious to the facts in the minds of many.

Discrimination is, of course, a national problem affecting all of us, a problem whose results are felt in the loss of national income, in large tax expenditures required to maintain and to ease the ravages of racial segregation, in increasing labor shortages and, often, in simple humiliation. The South is distinguishable from the rest of the nation in that, unlike the North, its racial customs have the sanction of law and they have been pushed to irrational extremes. These racial attitudes, with their sharper definition, lead to more disastrous economic results and more easily demonstrable effects.

Even in the face of the great progress which has been made in advancing the Negro's social and economic status in the North in recent years, the North still pays heavily for the preceding decades of discrimination. While opportunities for advancement are today being thrown open to Negroes at an encouraging rate, the influences which held the Negro back in the past and which denied him the chance to acquire the training and skills which would qualify him to move ahead in the economic scale still constrict the progress of the majority of Negroes, and therefore the progress of the rest of the

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people and the nation. An army travels as fast as its slowest soldier is an adage that applies to the progress of Americans.

Statistics cited

In New York State, which provided national leadership in the movement to enact anti-discrimination laws, fairly recent studies show that 12.5 per cent of the state's Negro population has an annual income in excess of four thousand dollars, and 87.5 per cent have a yearly income under four thousand dollars.

Nationally, the economic position of Negroes comes into sharp focus in statistical comparisons with the white population. The per capita income of the 17 million Negroes in the nation is 1,070 dollars (before taxes), compared to slightly more than two thousand dollars among whites. Exactly 80.9 per cent of the Negro working population earns less than four thousand dollars a year; and 41 per cent of this number earns under two thousand dollars annually. By comparison, 48.4 per cent of the white working population earns less than four thousand dollars yearly and 19.5 per cent makes less than two thousand dollars a year.

Laws which bar discrimination in employment, in combination with the practical reality of an acute labor shortage, have in fact virtually dissolved racial barriers in most of the large industries in the North. Negroes with training need not look far for suitable employment. but these Negroes are still relatively small in number in terms of the total need. In the main, the job opportunities open to Negroes are at the lowest levels of work and lowest levels of wages.

Segregated housing, against which the North, on the other hand, has made little significant progress, is another facet of discrimination which is indefensible on both moral and economic grounds. The seething slums into which most of our Negro population is packed represent not only a hideous offense to human dignity, but a constant strain upon state and municipal treasuries. Their maintenance—in terms of police and fire protection, health and other services—accounts for an average of 50 per cent of most local tax expenditures, yet their tax yield to the community rarely exceeds five per cent of the total income. The National Tax Foundation places the total bill for this at close to a national figure of two billion dollars annually.

In the South, the picture is a much more drastic one, often defying comprehension. The recent violence in the South over the school integration issue certainly can be discounted as being un-

representative of the majority of the people. But the attempt to evade the Supreme Court ruling by a variety of legislative schemes and alternatives—any one of which would bring financial ruin to any state which actually put them into effect—gives indications of an obsessiveness which has lost all touch with reality.

The South has paid dearly for its determination to maintain its dualistic school system. For several years before the 1954 decision of the Supreme Court ordering desegregation of the schools, southern states, pinning all their hopes upon the "separate but equal" decision of the Court in 1896, engaged in a frantic race with the Court in an effort to provide equal educational facilities for its Negroes. By the time the fateful decision came along, they were far from their goal and were extended beyond their depth financially. Even with this rush towards improvement, it has been estimated that their objective of equal educational facilities could not be reached before 1962, and by that time the annual cost would be two and one-half billion dollars, or nearly a quarter of *all* southern income.

As it is, the South is already paying heavily for its dual systems. It has to buy two of everything: two schools, two bathrooms, two drinking fountains, two parks, two beaches, two doors, two communities. The cost to the South is difficult to put in terms of dollars, but the dollars have not been invested in a stable, growing society. They have merely purchased repression and bitterness.

This cost represents a drain on the people of the South, both white and Negro. For the duplication is a loss in working hours, and a waste of materials and resources as well as a loss of such benefits as better health services, improved school and library systems, better roads, more parks and recreational facilities—all the social benefits that some of the taxpayers' money goes into.

Jobs and opportunities

The rest of the nation is also paying through the nose. As Negroes find themselves cut off from a means of livelihood, as they find themselves practically buried alive by a social and political system imposed upon them, they move to other areas where opportunities for advancement can be found. Since World War II, a veritable exodus of Negroes, estimated at about 200,000 a year, has been taking place in all the South. Nearly three million Negroes working in the North today were born in the South.

Every year these 200,000 Negroes, therefore, bring new economic and social problems to the

North, West and East. Some Negroes find jobs and opportunity and begin making a contribution to the national welfare; some do not and become charges of social agencies and the people outside the South.

Of the 17 million Negroes in the nation today, 11 million still reside in the South. Approximately 2,700,000 of these Southern Negroes live and work on farms and constitute one-quarter of all the South's farmers, operating one-twelfth of the South's farm acreage. The total annual income of the 17 million Negroes amounts (after taxes) to more than 15 billion dollars. More than half is earned by Negroes outside the South.

Plainly the problem of elevating the economic and social standards of the Negro in the South is one of considerable urgency, but its solution is inevitably a tortuous one—the North gives evidence of that. Still more unfortunate is the fact that the Negro must, to a great extent, fight his own battle.

Much of the progress attained by the Negro has come to pass in the course of the last two wars when his labor was needed, but his real and permanent gains have been made in places where he has been able to make himself felt as a political force. Where his political strength has become a factor, he has been able to demand from society—in the form of laws—the rights which the individual could and did refuse him. This has occurred in 15 states and 36 cities, and it is in these areas that his advancement has been most pronounced. Equality in educational opportunities is, of course, essential to the Negro if he is to ascend economically, yet education helps him little in areas where his franchise is either impaired or denied him.

But these political rights require the backing of both the federal government and the whites of the South who desire to make a break with the past. The government must supply the necessary reassurance and protection for the Negro in his attempts to exercise his privileges as a citizen; and the whites of the South must, in conjunction with federal guarantees, undertake a broad educational program which will encompass the Negro community and southern intransigents as well. Such action would involve neither new laws nor court decisions, and the progress of the Negro—and the entire nation—would flow naturally and abundantly from it. ■

Proportional Representation?

NEGROES comprise ten per cent of the U. S. population, but instead of 2,800 Negro medical students, which would be a proportional representation, only 761 were enrolled in medical schools in 1955.

Economics in Action

the line wavers

The mid-February stock market's sudden break to a 15-month low caused considerable surprise. It was a clear indication that some businessmen were uncertain about the future direction of the economy. The business graph was no longer showing the moderate but steady upward curve to which we had grown accustomed in 1956. The line has been wavering in several areas. It has not plunged at any point, but neither have the peaks been quite so high as were expected during this first quarter.

squeezed profits

Many factors have been causes and, in their turn, reflections of this increasing business uncertainty. Not the least of them is the so-called profits squeeze: although production has continued high, profits have not kept pace. As a result of high costs—of raw materials, labor and money—some companies are financing their plant and equipment expansion out of their earnings, thus bringing profit margins down. At the same time plant expansion has been postponed by many small businesses, and some larger companies.

other doubts

Another reason for the uncertainty is a lower rate in the accumulation of inventories; except for wholesale inventories, which show a back-up of goods caused by production running ahead of sales. Some other reasons for business doubts: housing starts have continued their decline. Household appliances, steel scrap, copper and aluminum prices have dipped. Foundries report that business is down and machine tools output is 40 per cent below a year ago. The demand for steel sheets and strips has eased, and over-all steel production is now below its record high. Auto production is still up, but auto sales have been below expectations. Freight carloadings have been disap-

pointing and soft coal production is almost nine per cent below what it was at this time last year. Farm prices, hence the farmer's purchasing power, are lower, the first decline since last October. Business failures have risen. The sensitive commodities price index is lower, indicating lowered demand.

the bright side

On the other hand, electric power and crude oil production are very high and steel makers are optimistic. Retail sales are about as high as a year ago, for wages are still rising, although factory hours of work per week are slightly down. New savings are catching up with the need for capital for industrial expansion, despite the continuing trend of heavy installment buying. And total employment is steady.

straws in the wind

At this point, the mild downswing expected later in 1957 appears to have set in already. It is not yet obvious whether the predicted leveling off is to follow immediately. One is led to think it will by the continuing concern in high places over inflationary pressures. One straw in the wind here is the Federal Reserve Board's belief that its tight-money policy will have to be continued, as shown by its request for an increase in the interest rate on government savings bonds. The Board expects, then, that business will continue to be basically sound. A second: the General Services Administration's postponement—in an obvious attempt to alleviate cost pressures in construction —of the building of some seven million dollars worth of government structures under its "lease-purchase" plan. A third: the increasing pressures both on Congress and from within Congress to trim the national budget. The House-Senate Economic Committee has joined the chorus, but opposes general tax cuts since they would contribute to inflation.

turning point

Business is at a turning point but the trend is not yet clear. The way in which businessmen assess it and respond will in itself be a major determinant in

the trend. The consumers' response to higher prices will also be a major factor. Price resistance could stiffen competition and thus increase the dollar's purchasing power as well as savings. The situation in the Middle East is still in doubt, too, and it will affect our economy, whatever the outcome.

* * *

grassroots complaints

WASHINGTON—**The controversy over the size of** the budget for the next fiscal year continues. What amazes Capitol Hill is the apparent grassroots nature of complaints pouring in. The experience of former years was that people were always ready to write members of Congress and complain about high taxes. This time, it is increasing government expenditures that seem to have incurred the wrath of the letter writers. Evidently the public does understand that expenditures must be cut first before taxes can be lowered. Chances are that Congress will cut a couple of billions from the 73.3 billions that the President asked for last January. But his actual budget estimate of 71.8 billions will likely stand untouched.

double duty

The issuance of two reports on the impact and future course of U. S. foreign aid is sure to revive heated discussion over how much and where the U. S. should make aid money available. Administration spokesmen feel that foreign aid is here to stay. Congress is in a fund-slashing mood. It is becoming apparent that any program of economic assistance abroad will have to see double duty: first, to serve immediate practical purposes; second, to be part of a long-range developmental purpose clearly perceived by the American people and understood by recipients. Further studies of foreign aid are definitely in the works.

business as usual

With the pipelines in the Middle East going back into service, it looks like business as usual, at least insofar as Middle East oil is concerned. But the Suez

and Israeli-Egyptian controversies could shut off the pipelines at the first turn for the worse. This is why the oil-producing Arab countries are telling Nasser to "take it easy."

long way to go

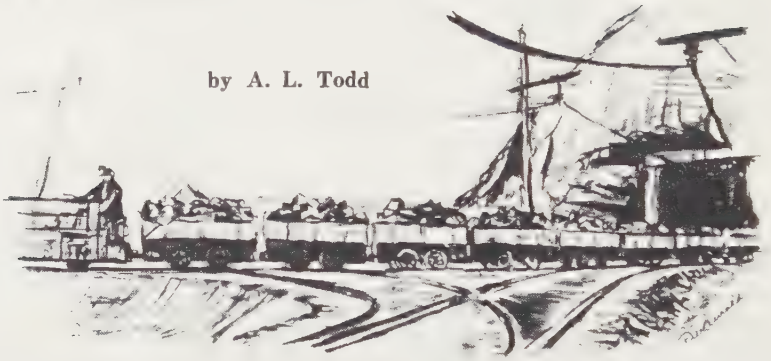
Expectation, as of this writing, is that Nasser will eventually agree to the passage of Israeli ships through the Canal and the Gulf of Aqaba, if he is given sole authority to collect tolls. The presence of UN troops in the Gaza strip and the Aqaba area will stabilize the situations there for a time, and it is hoped that the Israelis will accept Egyptian administration and good faith once the business of the passage of ships is settled. So there is a long way to go yet. The outcome? The U. S. would like to see compromises: free passage of Israeli ships; Egyptian collection of tolls with allocation of funds agreed upon by all; Egyptian administration of Gaza, with UN troops "neutralizing" border areas.

damning evidence?

What to do about the disclosures before the Sen- ate's Select Committee on Labor and Management Practices is giving the entire labor union movement cause for great worry. It is possible that such disclosures could heighten the prestige and authority of the AFL-CIO central body and bring about a general tightening of the enforcement of labor's new code of practices. But how far should the top leadership go now in stepping on some very big toes? Suppose the current investigations are survived by some of the more important and independent-minded leaders? The executive committee is naturally anxious not to blow wide open the feuds and controversies that exist within "unified" labor. On the other hand, it cannot leave to the government investigating bodies the job of cleaning house, if it appears that labor's house does need cleaning. The belief is that the parent body will begin to swing hard at unions and personalities only *after* Senate investigators have piled up a mass of damning evidence. ■

Forty cents a ton . . .

by A. L. Todd



That is what it costs to finance the UMWA Welfare and Retirement Fund

EVERY CONSUMER in the United States contributes indirectly to the Welfare and Retirement Fund of the United Mine Workers of America by paying for the goods and services that coal provides. The amount collected last year exceeded 154 million dollars —about 90 cents per American consumer—and over the past ten years, during which the fund has been operating, total collections have come to nearly 1,037,000,000 dollars.

The fund is financed today by a 40-cents-per-ton royalty on each ton of coal mined, which amounts to a tax on coal production. Although the operators pay the entire royalty to the fund, they have recaptured most of their contributions in their prices. In effect, we all pay for a bit of the miners' welfare—in the cost of an automobile containing a ton and a half of coal-fired steel; or in the electricity—generated by coal-driven turbines—we use in our homes.

This special favoring of the miners is a recognition of the strength of the UMWA, which based its demands on the belief that operators could and should pay for the welfare of the miners ostensibly to repair the damages wrought by years of neglect. Almost a million potential beneficiaries—miners, their wives, their children, and other dependents, widows and orphans—are eligible for pensions, hospital and medical care, and direct payments in the case of disabled miners, widows and survivors.

It is a unique program in the

sense that only the employer contributes to the fund. In most other industries, where pension and health programs are in effect, the costs are shared by employer and employee. Sometimes unions pay for health services out of funds contributed entirely by its members.

As the largest and most successful industrial welfare fund in operation in the country, the miners' welfare program has achieved an accepted place in America's economic life. It has contributed to the stability of the coal industry which in ten years has seen the average output per miner rise from six tons to 12 tons a day. It has pumped purchasing power into mining districts, and into the very family groups who most need it at times when it has been a most useful economic stimulant. Its effects can be clearly seen in an average coal mining area.

Carbon County might be any of the roughly 350 counties in 25 states of this country where men rip bituminous coal from the earth. It is an imaginary place, but one representative of the soft-coal mining areas of the United States. It has, for purposes of this examination, been created as an area producing one per cent of the nation's annual total of bituminous coal, and employing one per cent of the active bituminous coal miners.

Carbon County probably lies somewhere in West Virginia, Pennsylvania, Kentucky, Illinois or Ohio—the five states where three-fourths of our soft coal is produced. About 40,000 people live in this county, where 20 coal mines are operated by 15 companies under contract with the United Mine Workers. These firms employ some 2,500 coal miners, who with their immediate families represent a quarter of the human beings in the county.

The prosperity of the area rests on the economic health of these companies and the industry of which they are part. For, when the industry trembles as it did during the 1952-1954 slump in coal consumption, miners work short weeks, railroad employees are laid off, retailers face losing months, and lines stretch long at the state unemployment compensation offices. In such times the UMWA fund is a most important community stabilizer.

Last year the coal companies of Carbon County did pretty well. They mined nearly four million tons of bituminous. The UMWA fund drew its lifeblood from this total, close to one and a half million dollars. Let us see how the county shared in fund benefits.

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In one form or another, the fund funneled approximately 1,250,000 dollars into the economy of the county last year, a sum equal to five per cent of total retail store sales in the county. Well above half, about 750 thousand dollars, was paid in pensions to retired miners; most of the remainder represents payment for medical care and hospitalization.

A social drain

More than 600 retired Carbon County miners last year took a 100-dollar pension check once a month from their mailboxes. A few who have moved away to a more favorable climate in the evening of life received their checks elsewhere. Most pensioned miners are past age 65, and therefore draw social security checks from the U.S. government in addition to their UMWA fund pensions. These checks average close to 110 dollars monthly.

Not too long ago, these 600 elderly men would either have suffered privation at retirement and burdened their working children, or else they would have continued working long after they had earned the right to rest. To the community as a whole, worn-out coal miners were a social drain frequently taxing public and private relief agencies.

Today the retired miners enjoy a security which radiates to their families, as well as to the community. On the day that pension checks come to a given town, business is good in the grocery and hardware store, clothing emporium, barber shop and beer parlor.

Pensioned miners number almost one-fourth as many as the working miners in Carbon County, a surprisingly high ratio. Only 48 new pensions were authorized for Carbon County old-timers last year, compared to 68 the year before. The ratio of pensioners to active miners will remain about the same unless Congress lowers the social security retirement age from the present 65. Better safety conditions in coal mines, plus greatly improved medical care for miners, means the men will be more likely to survive to draw their pensions than was true in the past.

Company insurance plans

The UMWA fund does not, as some people inaccurately believe, take over the care of working miners injured on the job. Under state laws with varying liberality of coverage, the miner injured at work is cared for by company insurance plans having nothing to do with the fund. But in a few cases where treatment required by law has not been enough to restore an injured man to the best of health, the UMWA fund has paid for final stages of treatment.

The fund does insure miners' injuries not connected with the job. Far more important, it covers the worker's dependents, the pensioners and survivors of deceased miners. It has brought medical and hospital care within the reach of the mining community as never before. Last year approximately 475 thousand dollars was spent in Carbon County on this program.

Ten county men owe something very special to the fund. A few years ago they were bedridden, hopelessly maimed former miners, their backs broken in pit accidents. These ten were recently sent to special hospitals outside the county, where a process of operations, treatment and training put them back on their feet and taught them to care for themselves.

One part of the welfare fund program has not been felt in Carbon County. Everyone hopes it never will be but is glad of the provision. That is the emergency aid supplied to victims of coal mine disaster and their families, over and above other benefits.

The Achilles' heel

In Washington the fund had an unexpended balance of 130 million dollars at the end of the last fiscal year, a sum greater than the expenditures for a year's operation. It appears solidly financed and efficiently administered, which should guarantee it for a long time to come. Its Achilles' heel, however, is its direct connection with the production rate of the bituminous coal industry.

The fund went through the 1952-1954 coal production slump successfully, because the cut in revenues then did not seriously affect the level of benefits being paid. But a long, severe slump in the industry could finally force a cutback in the program. A long-range danger lies in the possible displacement of coal by petroleum, atomic energy, solar energy or other technological developments. Thus, the rate of fund income could drop faster than its obligations to UMWA members—again with the prospect of a cutback in benefits.

The UMWA fund came into being because it satisfied a demand that could not be filled in any other way. It has, as a Senate Labor Subcommittee reported in 1955, become "a far-flung pioneering, well-run program of immense value to its beneficiaries."

Whether the consumer—and the economy—will be able to support the special demands of other special groups with similar social needs is another question. Thus far, the consumer and the economy have been able to meet the welfare needs of the miners with their contributions of 40 cents a ton. Other programs by other special groups may well run ahead of the abilities of the economy. ■

Dexter M. Keezer

Director, McGraw-Hill Economics Staff

Anticipating Economic Change

Q *Dr. Keezer, as head of the economics department of the world's largest publisher of business magazines, you are engaged in a special kind of economic research. How would you distinguish between your work and the work of other economists?*

A Well, insofar as our efforts to get at the truth are concerned, we operate in much the same way as an academic department of economics. When I came to McGraw-Hill after spending some years teaching at a university, I felt just as free in my efforts to get at the truth in my new environment as I had felt in college. I should like to emphasize this, because there is a broad feeling in the academic community that any group working in a business environment necessarily has its views tinctured by the concern for making profit and, therefore, is less objective and scientific.

Q *Do you study the same problems as the university scholar?*

A Yes, but with one important difference. By and large, academic economists are concerned with what *has happened,* or at best, with what *is* happening. What differentiates us (and business economists like us) from the academic economists is that everything we do is pitched forward. Since our research must be of use to businessmen, we're always on the lookout for what is *going to happen* to business in the future.

Q *How must this information be presented to the businessman if he is to make wise decisions?*

A The businessman depends on concrete answers and concrete judgments. The typical academic economist says, "Well, on the one hand this may happen and on the other hand that may happen"—and then leaves you to work out the answer for yourself. The business economist, however, must make a judgment and explain it in such a way that the businessman can make a decision and act on it. If and when this judgment goes wrong, it is my observation that the businessman is very understanding. But he must have something concrete to work on.

Many factors influence capital investment

Q *Well, what are some of the areas of the economy you are watching right now?*

A Since the magazines published by McGraw-Hill are concerned principally with the capital-goods industry, we are naturally always on the lookout for trends in capital investment. Of course, there are many factors which influence capital investment. Obviously, if you have a very severe squeeze on business profits, for example, this will be reflected in capital-goods spending in a variety of ways.

Q *Do we have such a squeeze on profits today?*

A In the last few weeks, I have read a good many dogmatic statements on this subject. The facts of the situation are roughly as follows: During the first nine months of 1956, there *was* a downdrift in business profits. There is some evidence that there was a considerable upturn in the last quarter, but this evidence is by no means conclusive. As to what is happening currently, we are sort of feeling our way in the dark. The simple fact is that, at the present time, there simply isn't any *precise* information that tells us for certain which way the wind is blowing.

Q *One indication of what is happening to business profits would be business spending plans for 1957. Have you made any recent studies to see whether there have been any downward revisions in provisional spending estimates for 1957?*

A We are in the process right now of sending out the questionnaire

for our annual survey of business spending plans for 1957, which will be out some time in April. We made our preliminary check after the election in 1956. I have resisted making any comprehensive checks since then because there has been a tendency in recent weeks, especially on Wall Street, to base business judgments on emotion, rather than on statistical objectivity. Today, if somebody were to cancel plans to build an outhouse, it would probably be played up as though it were at least a one-hundred-thousand-ton steel mill. Seriously though, we have no evidence to suggest that there has been any change in business spending plans from the near record levels we reported last fall.

Q *Do you agree with those who believe that inventories are top-heavy and that we are in for a period of extensive inventory liquidation?*

A Well, it's always a pleasure to talk about inventories, because no one really knows anything about them and you are not inhibited by the facts. Obviously, this is one area we *try* to keep track of. At present, we have no reason to feel—note, I say *feel*—that inventories are so top-heavy that they are a serious threat to the current business situation.

Retail sales are moving at a satisfactory clip

Q *What about retail sales?*

A I've been watching this area closely in recent weeks. For, while we concentrate on the capital goods segment, we also pay close attention to what is happening at the retail end. Obviously, if retail goods weren't selling, we wouldn't need new equipment to produce them. But latest reports indicate that the kind of jitters that has occurred down at the lower end of Manhattan Island has not affected retail trade. Sales are going along at a very satisfactory clip.

Q *You seem to be a good deal more optimistic about business conditions than many businessmen. Don't you think that the current shortage of credit has seriously affected the rate of business expansion?*

A Well, I have no doubt that some smaller, relatively weaker enterprises have been unable to get the money they need to go ahead, just as I have no doubt that the tightness of money and the peculiar form

which this tightness has taken in the housing industry has something to do with the fact that housing starts have drifted downward.

Q *But you don't think that tight money has seriously affected the corporate sector of the economy?*

A Generally speaking, I don't think that the credit shortage has been serious. Up to now, the tight-money policy has not exerted a break on capital expansion. What with depreciation reserves, retained earnings, and available external funds, the corporate sector has not been seriously affected.

Activities concentrated in capital-goods industries

Q *Has our tax system anything to do with this situation?*

A When all except the small corporations are paying 52 per cent on corporate income, a four-and-one-half per cent rate of interest on a loan, in effect, comes out at slightly over two per cent. The result of this is perfectly clear: Corporate borrowers are prepared to pay, and it is the other people who get squeezed. Certainly, in the field where our activities are concentrated—capital-goods industries—shortage of credit has not been a seriously limiting factor thus far.

Q *One big question mark in the current business picture seems to be the extent to which our consumption has been financed by debt. What work has your office done to better determine the reaction of people at various income levels to debt?*

A We have not done anything in this field that you could dignify as "work." We follow the general volume of consumer credit, and we watch whether it is going up or down in relation to what seems to be the immediate business outlook. But the answer to your question must be that, like everyone else, our ignorance of this whole area of consumer debt is monumental.

Q *In general, what is the main difficulty confronting the business economist when he tries to predict the economic shape of things to come?*

A I suppose there are two major obstacles. One is inadequate information. But this difficulty is gradually being overcome as our techniques of gathering data improve. In this connection, I think our sur-

veys of plans for capital investment have added real dimension and knowledge to predictions of what is likely to happen. I think the same is true of the annual survey of consumer spending plans issued by the University of Michigan Survey Research Center.

Q *What is the other difficulty?*

A The fact that we are dealing with unpredictable human beings.

Human behavior and the economic situation

Q *And this is the more serious problem—that human behavior is basically unpredictable?*

A Well, there are some who believe that economic problems are really psychological problems. I don't think this is entirely true. As long as I can be confident that the basic economic structure is stable, I am very tranquil about the kind of tremors and emotional upheavals that occur periodically throughout the financial districts. Earlier this year, as you know, there was considerable anxiety about business trends. I didn't share this anxiety because consumer income was at a high level and moving up, and the government was proposing even bigger expenditures.

Q *Don't you think that the attitude of people in the speculative centers toward their economy greatly influences the long-run economic situation?*

A Generally speaking, I don't. One could, of course, cite in support of that theory the rash of business fears caused by recent official and nonofficial statements to the effect that we are headed for a depression if expenditures continue at the present high level. But I do not think that people will be so influenced by this pessimism that their fears will reverse the solid basis for economic progress that we have today.

Q *Would you not say that the "sell-off" trend in stocks during January and February was a reflection of people's moods?*

A I wouldn't deny that. My point is that there is no direct cause-and-effect relationship between "moods" and the economic situation. I *do* think we have in this country a rather peculiar problem growing out of the fact that we have become so rich. Perhaps a third of every-

thing currently produced is in the luxury-item class. When you have this magnitude of "optional" consumption, it could very well be that people's moods become more important. But it is well to remember that approximately two-thirds of production and consumption is based today on fundamental economic necessities. I take it that whether we "feel good or bad" doesn't make a great deal of difference here. We still have to feed and clothe ourselves, and so on. From a strictly economic point of view, only poverty provides true stability.

Q *Would you say, then, that our moods and feelings will become increasingly important as we get richer?*

A In a way. It may be that when the full story is told, we'll see that we are more than ever prey to moods because optional consumption is on the increase. Of course, I'm one of those who has a very strong feeling that the impulses that will be provided by research and development are definitely going to upset the cyclical ups-and-downs that we normally experience in our kind of economy. Be that as it may, the growing role of optional consumption certainly elevates the whole business of selling things into the status of a basic economic function.

We have to have a certain amount of instability

Q *In any case, should we worry about this "instability of wealth"?*

A In a sense, it is true that the wealth of our economy has given us an element of instability, but, of course, we have to have a certain amount of instability to shake out the incompetent and to reward the competent.

Q *Can we keep this instability within bounds?*

A I think we are moving in that direction. A lot depends, however, on whether the Michigan Survey Center and other research organizations will be able to discover a great deal more about the buying plans of consumers. And that brings us back to the old problem of all social science, economics included: man's predilection for acting contrary to supposedly well-founded predictions. In the final analysis, we cannot fully escape the fact that man is unpredictable.

Q *Thank you, Dr. Keezer.* ■

Everyday Economics

THOSE about to retire from industry are being counselled to check with their local Social Security office at least every two years after retirement. New legislation frequently changes eligibility rules or increases allotments, and for that reason a visit to the local Social Security office may mean money in one's pocket.

Travel preliminaries

PASSPORT application requirements, vaccination information and how to secure visas are among the travel tips in *You and Your Passport*, which can be had for five cents from the Government Printing Office, Washington 25, D.C.

Security credit

THOSE WHO worked for more than one company last year, may have overpaid their Social Security tax. Amounts over the 84-dollar maximum tax due can be recovered by entering the excess in the Income Tax Withheld column, and writing across one of the lines in the Where Employed column "F.I.C.A. Tax Withheld."

Cycling safety

EACH YEAR almost 600 Americans die in accidents involving bicycles. Two-thirds of these are youngsters between five and 14 years old, and nearly ten times as many males as females are killed. Four out of five deaths are caused by collisions with motor vehicles, mostly passenger cars. Obviously, caution and a sharp eye are required of motorists, to avoid such tragedies. As for the cyclists, parents should emphasize these safety rules: never swerve into the path of a car; be especially careful when coming out of a driveway or entering a traffic lane from behind a parked car; do not race with other cyclists on high-

ways; observe stop signs and other traffic regulations; provide reflectors and lights after dark; and keep bicycles in good repair.

Prospector's prospectus

IF YOU have been bitten by the prospecting bug and are planning a jaunt to some uranium-laden area, send for *Prospecting for Uranium*, available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. This handbook provides information on the occurrence, identification and sale of uranium-bearing ores, what types of deposits to look for, how to use a Geiger counter and what laws affect prospectors.

That certain deadline

NOTABLE tax deadlines for April: On April 1, manufacturers, retailers and others deposit excise taxes for February, if over 100 dollars. On the 15th, none of us escapes—individuals file the final 1956 income tax return on form 1040 or 1040A and pay the balance of the 1956 return, also file declaration of estimated income for 1957 on form 1040ES, paying the first installment. Other requirements that come due on the 15th: farmers who filed the 1956 income tax declaration by January 15, 1957, file the final return and pay the balance; farmers also deposit all undeposited Social Security taxes withheld from wages paid employees in the 1957 period through March, if the amount exceeds 100 dollars; partnerships, executors, trustees and gift donors must also meet specific requirements. On April 30, employers deposit income and Social Security taxes withheld, if more than 100 dollars, and those withholding less than 100 dollars a month in the first 1957 quarter file the quarterly return and make their deposit; housewives file the Social Security tax return on wages paid employees during the first 1957 quarter; and manufacturers, retailers, etc., who are paying excises by the quarter, file the first 1957 quarter return and pay up.

Leveling the lump

IF YOU have been working on a scientific or artistic project for at least 24 months, or rendering a personal service on a specific project taking at least 36 months to complete, and your payment is a lump sum, you can compute your tax so that it will be no greater than what it would have been had you received the amount in regular payments throughout the working period.—G. M. S.

The Five per cent Privilege

Increasingly, corporations are using this tax exemption to assume wider social responsibility

by Grace McGraw Smith

LAST YEAR, a pharmaceutical company gave almost a million dollars in grants for scientific research. A watch manufacturer maintains a school for training disabled war veterans as watch repairers. A farm machinery company contributes to research in agriculture and rural life. A firm that manufactures radios and phonographs gives regularly to promote the study, composition and appreciation of music. And a chain of drug stores contributes to the nursing profession and medical research.

These are all examples of a new kind of philanthropy, the corporation foundation, which began to come into its own only six years ago. By 1952 there were already some 1,500 such foundations and the number is constantly increasing.

The private foundations established by Ford, Rockefeller and Carnegie are now well-known. Begun in the heyday of personal fortunes, they were set up with broad philanthropic and educational goals by means of large donations from individuals or families. But our present steeply progressive tax rate has brought with it a decline in the setting up of similar new foundations. Today's young and little-known corporation foundations, established with money from corporate profits, may be ready to fill in the breach as major nongovernmental sponsors of education and welfare.

The possibility for serious philanthropy on the part of business began with an amendment to the Internal Revenue Act of 1936. This amendment allowed corporations to deduct from their taxable income contributions of not more than five per cent of their net earnings before taxes, for education, science and welfare. The provision was little used until 1941, when both corporate taxes and profits rose sharply, thereby considerably reducing the cost of philanthropy to the corporations. By 1953, there were enough corporation foundations to contribute about 24 million of the total 494 million dollars given for charity and education from all quarters,

including individual donations. And this with almost none of the corporations using the maximum five per cent deduction allowable.

The corporation foundation is the junior member of the foundation group, which includes family or personal foundations, some for general research and some for closely defined purposes. It may be a company foundation, a trust or a fund. However set up, it is a tax-exempt, nonprofit, legal entity separate from the company. More often than not its trustees are all, or nearly all, officers of the corporation who, as it were, wear one hat as company men and another as foundation directors.

The company foundation

Contributions may come not only from the company but from officers and chief stockholders as well. When this is the case, the foundation often exists for special purposes, like the Altman Foundation of B. Altman & Co., New York department store, which serves philanthropy and education but makes a special point of helping its own employees.

Nearly all corporations give at least to local charitable and educational organizations, and they have found several advantages in a company foundation. Under such a setup, requests for donations are channeled and their scrutiny is made easier. More careful planning of the company's giving is also assured. Above all, an ongoing budgetary structure is provided. Since a company's philanthropic appropriations depend on its annual profits, there are lean and fat years. But money given to the foundation can be held over, which allows a leveling of the amount given annually and makes its program reliable from year to year.

There have been abuses, of course. Heavy taxes, especially since World War II, were an incentive for business to use the five per cent privilege as a device for avoiding taxes. For example, some corporation foundations purchased business property, then leased it back to the seller, thus making its income from rent tax-exempt. As a result, Congress passed the Revenue Act of 1950, which taxes the unrelated business income of foundations, regulates leasebacks and refuses tax exemption for unreasonably accumulated income or in the case of certain transactions proscribed by the Act.

Although some foundations are used merely for regulating the company's donations to local philanthropies, the goal is often wider than this. Many now give to promote the welfare of that segment of mankind which will, in the long run, benefit the corporation, its employees, stockholders

or business relationships. This broader view of what would benefit the corporation has caused some difficulty. With the exception of local charitable donations, stockholders often objected to the redistribution of earnings belonging to the corporate owners, and some have actually sued a corporation for going beyond such limits.

Imaginative programs

This happened in New Jersey in 1951, when stockholders questioned a donation by the A. P. Smith Co. to Princeton University. The issue was resolved in favor of the directors. When the U. S. Supreme Court dismissed the appeal "for want of a substantial federal question," it was taken as a test of state laws which grant corporations the authority to make donations for the public welfare. As a result, some such legislation has now been adopted by about three-quarters of the states, thereby discouraging similar suits. With this protection, corporation foundations are now developing more imaginative and experimental programs.

A good example of this expanded program is General Electric Company's Educational and Charitable Foundation, established in 1950. Through its graduate fellowship program it gives about a third of a million dollars annually for 88 graduate fellowships for study in at least 15 scholastic areas. It also supports a summer graduate study program at six universities for high school teachers in chemistry, physics or mathematics. At four of the universities, instruction is also included to show the importance of mathematics to any field of study. In this program, nearby GE plants are used as "laboratories." The company has other programs, both within and outside the foundation.

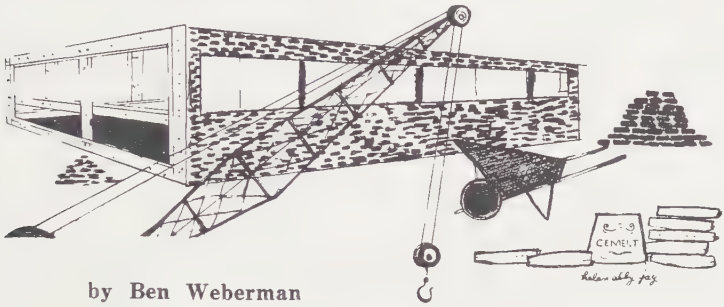
In the opinion of many, the Corning Glass Foundation is the leader in developing an independent program. Its goal is broad enough to support poetry, along with fields of inquiry more closely related to the company's interests.

It is in the further development of such imaginative giving that the corporations will continue the work of the private foundations established in the earlier years of this century. ■

Education and Industry Join Forces

MANY corporations are now sponsoring employee education. In 1956, for instance, 3,865 employees sponsored by 375 companies in Chicago studied at the Illinois Institute of Technology. The Johns-Manville Corp., in another kind of program, pays 65 per cent of tuition, fees and inter-city transportation costs for general courses and total costs for highly specialized courses, when successfully completed.

When corporate management decides to expand today, much more is at stake than the profits of a particular company



by Ben Weberman

Industry's Command Decision

BUSINESS SPENDING for new capital plant and equipment is again at record levels, following a peak of 35 billion dollars set last year. But despite this rapid rate of expansion, some managements are beginning to question the wisdom of further expansion at the current rate.

Once again, as during the slight recession of 1954, these questions are being raised by corporate spenders: Will expanded production facilities be able to withstand the effects of growing competitive pressures and narrowing profit margins? What will be the effect of increased activity on the general economy of the nation and ultimately on themselves?

For, when management decides to expand today, much more is at stake than the solvency of a particular company. Upon the correctness of corporate decisions depend the jobs, incomes and livelihoods of hundreds of thousands of individuals, some of whom may never have heard of the company in question.

Generally, when a company decides to appropriate capital funds, it is for one of three reasons: to replace worn-out machinery, to increase efficiency by installing better equipment or to create new production facilities. While the first of these is a necessity if the company is to continue at present levels of production, the other two —expansion and modernization— stem from the desire of management to *increase* production and sales. A decision here is very much less clear-cut. Many factors must be considered. Before it can reach

a wise decision, management will need the reports of accountants, market analysts, engineers and other key professional men. Even then, it will find no prepared guides to the problems that confront it. Only time will tell whether it has made the right decision.

Questions to ponder

Nevertheless, there are certain questions which management must ask itself before it can reach a final decision. By how much will expansion reduce unit production costs? Will the market be able to absorb these production increases? Will competition from like products or synthetics seriously curtail expanded production? What about the future availability of labor and natural resources? No management can embark upon a program of expansion unless it can come up with a favorable answer to all of these questions.

Right now, the cost and the ability to raise funds externally is often the deciding factor. With the current tight-money situation and rising interest rates, many companies (especially the smaller ones) are thinking twice before seeking new funds for expansion, especially if they expect money costs to drop in the near future.

Here, as elsewhere, it is important to time expansion projects in such a way as to keep costs low. By tapping the money markets at just the right time, companies frequently can save as much as two per cent or more on a bond issue and more than ten per cent on stock. Similarly, buying equipment and hiring workers at the most opportune time often mean a difference of more than ten per cent in the cost of expansion.

At the moment, general uncertainty about the future direction of business, together with the shortage of available funds, is leading corporate managements to examine more carefully their capital outlays. General Electric, for example, although it has not altered its total of planned expenditures for the next three years, does admit to some rescheduling of spending. Expansion has been deferred in some areas, while it has been stepped up in others. The tendency has been to emphasize modernization of existing facilities rather than the creation of new ones. This shift reflects GE's anticipation of greater competition. It also indicates that expansion plans are not rigid and can be adjusted to suit changing circumstances.

This kind of flexibility is becoming increasingly characteristic of the expansion programs of many industries. As companies plan further and further ahead—five-year programs are fairly common

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today—their planning must necessarily be more flexible to permit adaptation to unforeseen developments.

Of course, different industries have different expansion problems. The petroleum industry enjoys great flexibility in planning because its fixed assets are generally small in relation to the total volume of business. Allocations for plant and equipment make up only a small portion of the total expenditures of a company like Continental Oil; the rest can be used for the exploration and development of crude oil reserves. Under these circumstances, it is comparatively easy for a company to control the amount of money it chooses to spend in any one year.

Flexibility in planning

Again, the biggest problem for companies like GE, which produce a large variety of finished goods, is their sensitivity to market fluctuations. But because of their proximity to the consumer market, and since they produce such a variety of goods, they can readily adapt to market changes.

Flexibility in planning, however, is a luxury which is not enjoyed by all. Obviously, those industries engaged in refining, processing and semi-fabrication do not enjoy the same flexibility as industries which produce the final product for the consumer. For the most part, the demand for semi-fabrication capital goods follows well-established lines. Aluminum refiners and processors, for example, put out just three forms of aluminum—rolled, cast or extruded. Such an industry will seek, in its expansion programs, to expand the sales potential of established products and to cut production costs by modernizing existing facilities. It will seek to compensate for the great cost of installing expensive mill equipment (which cannot easily be halted once it has been started) by designing "basic" installations which can be easily expanded, when and if economic conditions warrant.

The procedures whereby corporate managements reach their final decision on expansion vary as widely as the different problems faced by different companies. Companies manufacturing consumer goods, for instance, find that most expansion suggestions come from their sales departments, which are traditionally optimistic about their ability to sell more goods if more goods are produced. At General Motors, for example, divisional chiefs, or committees representing them, initiate most of the suggestions for expansion. Under the GM policy of decentralization, each division makes its own estimates for future sales, and these estimates, along with the predictions of the central office, gener-

ally shape the recommendations upon which top management bases its final decision.

Companies in the chemical and electronics fields, on the other hand, have a rather different approach. In these industries, where new products offer the principal growth opportunities, expansion plans are more likely to be initiated by research departments. In either case, however, it is the board of directors which has the final say in approving or disapproving specific projects.

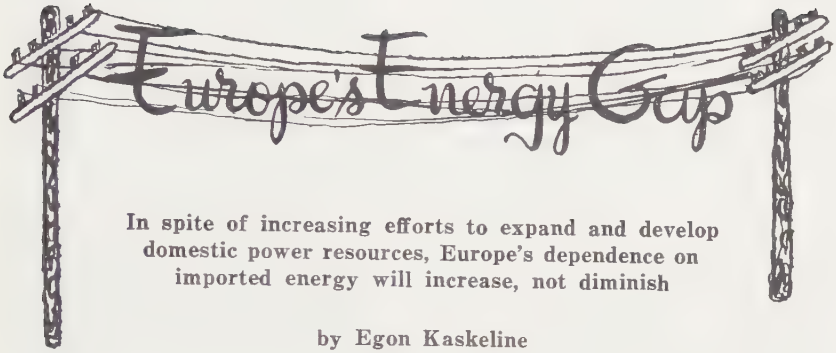
Size, while important, is by no means the sole determinant of how a business selects a plan of spending for expansion. Certainly, there is no reason to believe that one company is necessarily more scientific about project selection and timing than another simply because the over-all task is larger. The expenditures of a billion-dollar corporation may be no heavier in proportion to assets and sales than the expenditures of a million-dollar corporation; yet, the ultimate impact may be relatively the same for both.

Scientific planning for expansion by all companies, be they large or small, must go through certain stages. First, there must be a survey of expansion possibilities. The results of this survey are then analyzed with the aid of reports from experts within the company and sometimes from without. Once this necessary data has been compiled and the problem of timing has been analyzed, somebody makes a decision. For, in spite of the proven advantages of scientific planning, there is still nothing automatic about management decisions. The risks may have been reduced, but they certainly have not been eliminated.

Scientific planning for expansion can make an important contribution to future economic growth and stability. Science is continuously creating new opportunities and challenges. Whether our economy will be prepared to take advantage of these opportunities depends largely on the combined wisdom and foresight of our industrial chiefs acting on the basis of today's facts. ■

"A Rolling Stone . . ."

Two of the biggest expansionists on the industrial scene—American Telephone & Telegraph Company and Standard Oil Company of New Jersey—are putting more money into their programs than they did last year. In 1956, AT & T laid out some 2.2 billion dollars, about six per cent of the total spent for expansion by all concerns in the U.S. This year, it plans to spend 2.5 billion dollars to continue the expansion. Standard used nearly a billion dollars to expand its facilities last year, and in 1957 is outlaying 1.25 billions.



In spite of increasing efforts to expand and develop domestic power resources, Europe's dependence on imported energy will increase, not diminish

by Egon Kaskeline

WITH work on the clearing of the Suez Canal progressing rapidly, there is hope that the flow of oil to Europe will soon be restored. But the economic impact of the Suez crisis will not pass away with the reopening of the world's most important man-made waterway. Western Europe is not likely to forget that her well-being and prosperity depend in part on the security of her lifeline with the oil fields in the Middle East.[1] For, if it did nothing else, the Suez crisis served to dramatize Europe's dangerous dependence on imported energy.

Of course, Europe's statesmen and economists fully appreciated the importance of Middle East oil long before the Suez crisis called attention to the issue. In 1955 —the last year for which complete statistics are available—Western Europe's total energy consumption was estimated at some 730 million tons of coal *equivalent* (a technical term for the amount of energy furnished by one ton of coal). Of this total, approximately 20 per cent had to be imported from abroad.

Indications are, moreover, that this dependence on overseas fuel will increase, and increase very rapidly. Europe's population is growing. Industrial production is more than 50 per cent greater than before World War II. And with industrial expansion, energy consumption is also expected to increase, although not quite as rapidly as industrial output. According to the Organization for European Economic Cooperation (OEEC), a one per cent rise in national output requires only 0.7 per cent in additional energy.

Even so, experts predict that by 1975 Europe's use of energy of all

kinds will almost double, amounting to some 1,200,000,000 tons of coal equivalent. How will this need be satisfied? In 1955 Europe produced 584 million tons of domestic energy and imported another 142 million tons. By 1975 she is expected to produce 755 million tons of energy; but imports will also continue to increase, rising from 20 per cent of home-produced energy in 1955 to 37 per cent in 1975.

Closing the breach

The problem is perhaps even more serious than these figures indicate. For who are the biggest industrial users of energy? They are the steel mills, the chemical plants, the transportation industries—in other words, those industries which have made the biggest contributions to Europe's postwar economic boom. Obviously, any serious cutbacks in these sectors because of fuel shortage could have a serious effect on the entire economy. In recent years, moreover, many European plants have switched from bituminous coal to oil in an effort to cut costs and improve the efficiency of their operations. As this modernization of Europe's industrial installations proceeds (and her long-range economic future depends on it) her reliance on imported energy must grow.

During 1955, Western Europe spent some 3,500,000,000 dollars (1,650,000 dollars of which went to defray shipping and freight costs) for all her fuel imports. These millions had to be paid out in order to close the breach between insufficient home-produced supplies and growing industrial demands.

The importance of the Suez crisis is that it made the average European citizen conscious of the precarious energy situation as statistics on fuel exports and imports never could. For it is the average citizen, rather than Europe's industrial establishments, who has felt the impact of the Middle East crisis most strongly. Faced with critical fuel shortages, most European governments decided to curtail automobile traffic and residential heating and power rather than industrial production; for that would probably have resulted in mass unemployment. So far, industry has not yet felt the full impact of the fuel shortage, and as long as oil reserves in European refineries can be replenished by increased shipments from the Western Hemisphere, industry is not likely to be seriously affected.

But as important as relief shipments of oil from Texas and Venezuela are to the Western European economies during the critical period of the Suez closure,

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they are necessarily a temporary measure. Much more will be needed if Europe is to meet her long-range energy problems.

A most important step in this direction will be concerted effort to expand and modernize Europe's own power resources in order to make her less dependent on imports.

These major power resources are:

Coal. Europe's leading industrial position has been and still is to a great extent due to her enormous coal deposits which, after a century of sometimes wasteful extraction, will last, in the opinion of experts, for at least another three centuries.

Antiquated coal mines

But while coal is still a major source of energy for most of Western Europe, it cannot meet the burgeoning demands for energy; nor can it attract investors in the numbers it once did. The expansion and development of new pits is a long and costly operation. For the most part, Europe's mines today are antiquated, working conditions are poor, and wages are low. Moreover, as Europe's present coal workers are increasingly exploited, mining will become more and more costly, because digging is going to deeper levels in overworked pits. This "new" coal is frequently of inferior quality. It is estimated that an increase of 42 million home-produced tons of coal within the next 20 years will require an investment of more than 12 billion dollars.

Obviously, new and more economical energy resources will have to be found and utilized. This is already being done, though there are varying states of progress from one country to another. Great Britain and the Benelux countries (Belgium, the Netherlands and Luxembourg) still depend on coal, although some British industries have begun the shift to oil. Just before the Suez crisis, 16 of Britain's major power stations were about to be converted.

Electric power. Rapid progress in the planning and development of the abundant sources of hydroelectric power is one of the more hopeful aspects of the European economic picture. (In Ireland, the Scandinavian countries, Switzerland, Greece and Portugal, hydroelectric power predominates as a source of energy.) While energy consumption from coal increased by only 23 per cent during the 1948-1955 period, consumption from hydroelectric sources increased by 68 per cent in the same period.

Economists predict that Europe's electricity demand will double within the next ten years. Today only about a quarter of Eu-

rope's hydroelectric potential is being used. France alone has made great strides in this direction; by 1965 she will probably receive two-fifths of her total energy needs from hydroelectric plants in the French Alps, the Pyrenees and other mountain regions.

Despite the vast potential of hydroelectric power, *three-fifths* of Europe's electricity is still created from thermal heat, and experts predict that by 1975 that percentage will be even higher. Unfortunately, thermoelectricity depends on conventional fuels, principally coal and oil, at least for the next generation.

Conversion to oil

Oil. Even the spectacular growth of Europe's hydroelectric and thermoelectric power is far overshadowed by the 244 per cent increase in crude oil consumption since 1948. Modernization of European industries, often financed in part by American economic assistance, has led to an increase in the construction of oil-consuming installations and the conversion to oil of plants that previously used other fuels.

Though Europe is rich in coal and potential electric power, it is very poor in petroleum deposits. Reserves in western Europe do not even constitute one per cent of the world's known petroleum deposits. Indigenous oil production is only 1.5 per cent of the world output; this production meets only ten per cent of Europe's oil needs. Ninety per cent of its petroleum must be imported, chiefly from the Middle Eastern states. In view of the tension in the Middle East today, it is little wonder that the leaders in this area are able to exert great pressures on the European economy.

The picture is not entirely bleak, however. New oil findings have been made in Europe—especially in France, Germany and Italy—and a most important discovery has recently been made in the Sahara Desert which partly explains France's "get-tough" policy in Algeria. France cannot renounce sovereignty over a country that may in the future supply her with much-needed oil.

Nuclear energy. The future use of nuclear energy is the big question mark in the European power picture. Most European countries have already developed programs for atomic plants. Great Britain, for one, has a 2,573,200,000-dollar program for the construction of 20 nuclear power stations. This is expected to triple nuclear power production by 1965.

Experts in this field, however, dismiss as Utopian any hopes for the extensive use of nuclear energy in the very near future. Even 20 years from now, according to the OEEC energy experts, atomic en-

ergy will not produce more than eight per cent of Western Europe's power requirements. And to accomplish this an investment of at least 11,500,000,000 dollars will be necessary.

Plans are also in readiness to set up a supranational European atomic authority (EURATOM) including France, West Germany, Benelux and Italy. President Eisenhower and Secretary of State Dulles have given assurances that the United States will fully support this project. During a recent visit here, René Mayer, Chairman of the European Coal and Steel Community's High Authority, received a promise by the U. S. to sell 40,000 pounds of atomic fuel to her allies abroad.

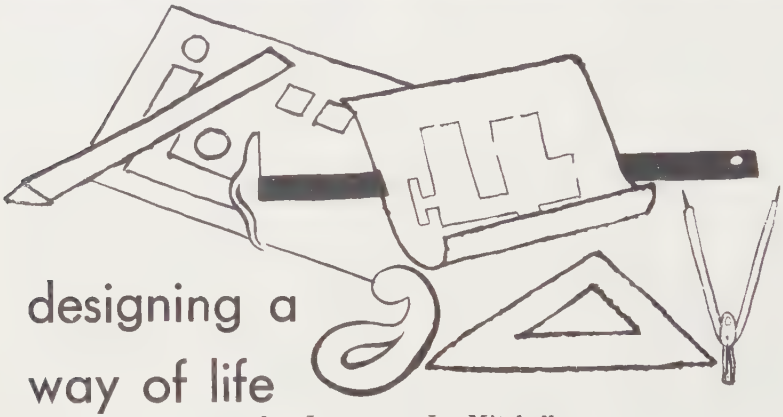
Possible solutions

It seems clear that, in spite of the increasing efforts of European countries to expand and develop their domestic power resources. Europe's dependence on imported energy will increase, not diminish. If the Suez crisis has demonstrated the dangers of this situation, it has also suggested some of the possible solutions. It is no accident that four months after the closing of Suez, the Prime Ministers of France, West Germany, Belgium, the Netherlands, Luxembourg and Italy finally agreed on a common market and that Great Britain (which has traditionally been opposed to European unification moves) has indicated her intention to become a member. Only through some form of supranational planning, it is becoming increasingly apparent, will Europe be able to make the most economic use of what resources she has; only a united Europe will be in a better position to bargain for the imported energy she needs to expand industrial capacity. ■

Answers to Challenge Quiz

(1) False *(see page 30)*
(2) False *(see page 35)*
(3) True *(see page 8)*
(4) True *(see page 18)*
(5) False *(see page 68)*
(6) True *(see page 44)*
(7) False *(see page 63)*
(8) True *(see page 59)*
(9) True *(see page 48)*
(10) True *(see page 56)*
(11) True *(see page 13)*
(12) False *(see page 72)*

The work of the interior designer not only creates a beautiful and useful environment, but also reflects the culture and personality of the times



designing a way of life

by Lawrence L. Mitchell

WHILE the function of an interior designer is far more widely understood today than it was as recently as ten years ago, a great many people, whether home owners or businessmen, still do not know what an interior designer can do and when it is profitable to make use of his services. It is obvious enough that when one breaks a leg, one goes to the doctor. Why isn't it just as obvious in the case of the interior designer? What is needed is a clear definition of the profession of interior designing.

Discipline in the creation of a good interior is the same as that in the creation of any work of art—be it painting, music or literature. Essentially, what a man wants when he seeks ways to make his office or plant look attractive, or what a woman wants when she looks for distinctive livability in her home, is discipline with a theme directed toward the creation of an interior that possesses a unified artistic expression. Neither the amateur designer nor the disciple of do-it-yourself techniques can quite fulfill such requirements. The professional interior designer has extensive formal training and has developed know-how from a long apprenticeship and hard-earned experience. Most importantly, he sees his profession in the perspective of his culture and environment.

People often ask me, "What is the difference between an interior decorator and an interior designer?" My answer is that the difference is often not discernible. On the other hand, if you require the services of someone who is to ar-

range and coordinate for you articles and items created by others, you can use an interior decorator. But if you want someone not only to arrange but to create, as well, such things as backgrounds, the shape and form of the room or interior space, furniture and light patterns, so that the entire effort constitutes a unified composition, then you need an interior designer.

In this country the demand for good interior design started some 50 years ago, but only since the end of World War II have the services of the interior designer come into sharp demand. There used to be a time when sales offices had sawdust on the floor, and kegs were used as office furniture. Today, businesses, retail establishments, commercial buildings, offices and factories, all are going through a face-lifting process. This face-lifting is really an updating; for business, like nature, abhors a static situation. There has been 20 times as much of this face-lifting during the past ten years than in the period between 1900 and 1945.

There must be many logical reasons why hundreds of millions of dollars are being spent to change the appearance and the design of the places where we work and in which we spend so much time. The expansion in the economy has been phenomonal since 1945, even when we make allowances for depreciation in the value of the dollar. In a sense, the tremendous attention paid to interior design today is a reflection of that expansion. Specifically, business competition, tax structure, public and employee demand, new building materials, improved construction methods, desire for efficiency and low-cost maintenance are some of the reasons behind the increasing demand for the services of the interior designer. Moreover, our desires and needs are shifting so rapidly that any face-lifting of interiors or buildings must keep in mind the possibility of affecting some necessary changes again within three to five years. Of course, we cannot even pretend that interiors will be completely redesigned in such a short space of time. That would hardly be practical. But it must be kept in mind that changes in the use and arrangement of peripheral objects will be desired and must be accomplished in such a way as to keep up with changes in style and in the forms of cultural expression.

It is my belief that the financial resources and sophisticated desires of our middle class are advancing so rapidly that within ten years a family will no more consider buying a home without ex-

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During the past 20 years Lawrence L. Mitchell has been commissioned to solve a wide range of design problems in homes, offices, showrooms, clubs and hotels.

amining the elements of interior design than it does today without studying the plumbing specifications. But the most dramatic expression of our present-day society is our dynamic business structure, and it is precisely in this sector that the interior designer is already being put to full use. It is apparently true for most of us that for five days out of seven we spend more of our wakeful hours at our places of work than in our homes. The competitive pressures are such that every business organization must consider what good and proper interior design can contribute toward improving its competitive position, toward increasing the sale of its products, raising the efficiency levels, improving the morale of employees, and so on. Besides these excellent considerations, when a business executive consults an interior designer with the thought of having his establishment redesigned, he is most likely to say, "We want this place to look like us."

The need for atmosphere

Once the problem is stated in that context, the interior designer must analyze the business organization as well as the people who work for it. If he cannot analyze the company and its people, he cannot analyze the problem. Obviously, the client wants his environment to exude a certain atmosphere and to evoke a favorable recognition. He wants the appearance of his office, plant, or home, for that matter, to represent the character and the objectives of the activity he is engaged in.

The pressures of costs are ever-mounting, and the prestige addresses of more recent vintage inevitably cost far more per square foot of rental than the older buildings. Therefore, it becomes necessary to take advantage of every square inch of space and utilize that space in the best possible way through proper arrangement of space, use of color, scale of furniture and lighting.

Ever-present is the problem of preserving flexibility. If the interior designer is working on a home, he must consider that the number of individuals might increase. If he is designing a plant, he must make allowances for possible expansion of the company in the future. If such considerations can bear fruit in a design form that lends itself to flexibility and efficient and economic expansion, the family is better off than its neighbors, and the company is better off than its competitors.

To all such problems the interior designer brings not only his experience and know-how, but also, it is hoped, his innate good taste and judgment. Moreover, the task of utilizing a design which will be flexible enough to be changed ten

years hence, in line with the current trends, is not very difficult for a professional interior designer. The reason for this is really very simple. Since designers make design and therefore set the trends, they usually know what is likely to be *the thing* in the next ten years. Indeed, when I go through the files of my organization and study the history of changes that have been affected by clients with whom we have been associated for the past ten, 15, or 20 years, I can see how relatively easy and economical it has been to keep interiors up-to-date when those very interiors were originally planned with the idea of making changes in the future.

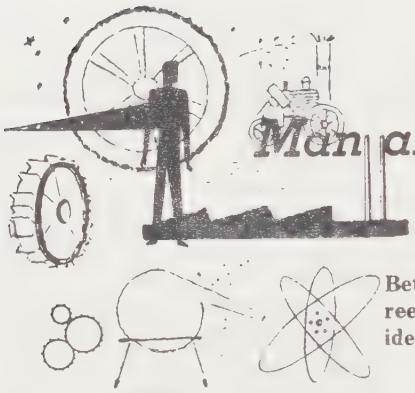
A great coordinator

One other aspect of the interior designer's function needs further explanation. In a sense, an interior designer is a great coordinator of resources and of talent. The home owner or business organization seeking to select proper materials, mechanics and artisans, is often bewildered by the variety of choice that exists. The interior designer and his staff have the facilities to perform the functions of designing, drafting and the purchasing of all services necessary to get the job done. In the last analysis, the total job will cost less when coordinated by the interior designer than when the individual or firm attempts to pick and choose, independently, in a piecemeal fashion.

Since his creation, man has required shelter and has used his powers of reason and his developing know-how to improve his shelter. Within the confines of where he works or lives, man has expressed his cultural philosophy lavishly—from the days of the early primitive cave drawings, the colorful nomad tents, the Greek temples, the magnificent edifices of Christian faith, on up to the current interiors still in the blueprint stage. The cultural development of lost societies has been uncovered and reconstructed through the patience of archeologists studying the craftsmanship inherent in interior design. Every discovery has proved that each society developed artistic achievements to embellish man's will for expression of culture through his method of living. If for no other reason than the fact that his efforts reflect the needs, culture and functions of mid-20th century America, the interior designer's place in history is assured. ■

Popular Question

BETTER BUSINESS bureaus get three requests for information every minute. The most frequent subject is home improvement, and the second is home appliances.



Man and the Economy

No. XXIII

Better statistics force economists to reevaluate some of their oldest ideas about the way human beings act

ANY noneconomist with enough stamina to wade through today's professional journals is in for a pleasant surprise. For, behind the forbidding methematical symbols and the sometimes even more forbidding jargon, he will find something that was not there before: a concern for human beings and the way they really act, not just the way they are supposed to act, in economic life. Economists, he will find, no longer distinguish between "economic man" and man in general. Economics has become "humanized."

During the last 20 years something of a revolution has taken place in economics. The worldwide depression of the 1930s and the increasing involvement of government in the economic life of nations are no doubt partly responsible for this. Economists have been called upon to solve new problems—problems of unemployment, inflation and total mobilization—which, in an earlier age, were either left to take care of themselves or were dealt with by governments in a more or less unsystematic fashion.

Of course, economists were always concerned with these questions; but it is one thing to analyze and describe a phenomenon, and something else to do something about it. For the first time, economists were called upon to find practical answers, and in the process they inevitably began to question some old assumptions. To take but one example: Economists had long assumed that in a free economy labor will tend to move where the biggest economic opportunities are. But during the war, industry discovered that labor would not necessarily move to those locations and industries which offered the highest wages. Families did not always like to

move to new neighborhoods, attend strange schools or make new friends just because the pay was higher or opportunities for economic advancement were greater. In the process of gearing the nation to a total mobilization effort, economists discovered that labor was not nearly as "mobile" as economic theory had traditionally assumed.

There is another, even more important reason why some of the most cherished beliefs of economists have had to be refined, modified and, in a few instances, discarded. As both the quantity and quality of statistics—and our ability to interpret them—has improved, it has become apparent that people often do not behave the way economic theory says they do. As a result, the whole "psychology" of economics is undergoing a searching reexamination.

Classical (and Marxist) theory, for example, tended to look upon man as a rational calculator whose sole aim in life was to achieve a maximum amount of economic pleasure (income) in return for a minimum amount of pain (work). According to this view, man will always seek a job where he can get the highest wages in return for the least amount of work; he will always invest his stocks where they will bring him the highest possible yield at the lowest possible risk; he will always buy those goods which afford him the greatest utility at the lowest cost. Moreover, man will always make these choices in a rational manner so that the outside observer can predict with confidence how he will act in any given situation.

But is this really so? Are we really the economic automatons assumed by theory? Of course not, and very few economists have ever believed we literally were such automatons. What they did believe, however, was that this was the most *useful* assumption that could be made about human behavior. Granted, man is a complicated animal whose acts spring from a variety of motives, some of which he may not be aware of himself. Granted, also, "man does not live by bread alone," so that when he buys an automobile it may be as much to impress his neighbors as to get to work on time. But nevertheless, *in the long run,* labor and capital *will* move where the rewards are highest; price *still* exerts an important (though not necessarily the most important) influence on our buying plans; in the economic realm at least, many of us *do* tend to seek income and avoid work.

On the other hand, economists have found these assumptions less useful during the last 25 years.

This is the twenty-third article of a series in CHALLENGE dealing with the economic development of man.

This has been especially true in this country. As more and more Americans came to share in prosperity, their economic actions ceased to conform to the traditional assumptions of economic theory, which had, after all, been formulated at a time when the vast majority of the population lived at a subsistence level. Obviously, if a man is very poor, he must take the best paying job he is offered, no matter where that may be. Nor can he afford to be "uneconomic" in the things he buys. Under such circumstances, price will inevitably be the principal factor in his buying decisions. But, as Thorstein Veblen had observed at the turn of the century, the "leisure classes" do not have to be economically rational—and they aren't. This group, he pointed out, would often buy products for completely uneconomic motives not so much because they needed or enjoyed them but because their acquisition would indicate that they could afford them and thus give them greater social prestige.

Veblen's leisure classes

Today, most Americans could be classed as members of Veblen's leisure classes; by which he did not mean people who do not work, but rather those who are engaged in managing, distributing and selling rather than in direct production. And most of us enjoy incomes which enable us to adopt at least some of the "irrational" economic attitudes that he described. Of course, "conspicuous consumption" is not the only "irrational" economic phenomenon; more and more, all our economic actions—whether as workers, consumers, corporation presidents, investors, etc.—are being influenced, at least in part, by factors which traditional economics had either failed to consider or had considered irrelevant.

The best, but by no means the only, example of this is in the field of consumer buying habits. While there are still many things that we do not know about the unpredictable consumer, what we do know indicates that many assumptions of classical theory will have to be drastically revised. Take "Engel's Law" (named after the "nonsocialist" economist, Ernst Engel) which stated that "as the income of a family increases, a smaller percentage is spent for food." While this is still true in general, consumer statistics reveal so many exceptions to the rule that its general usefulness has been questioned. At the lower income level, for example, the percentage spent on food has actually been found to *increase* in many instances as families buy better quality foods. Even at higher income levels, the proportion spent

on food does not always fall drastically as a family's income goes up.

Indeed, economists have found that as we have become wealthier, our expenditures have become more and more unpredictable. John Maynard Keynes' theory of consumer behavior, which held that our "propensity to consume" is pretty rigidly conditioned by our incomes, has certainly not proved correct in postwar America. A comparison of disposable personal income statistics with personal consumption expenditures will show that expenditures have not always followed income trends.

"Noneconomic" character

But consumer spending is not the only field where the traditional assumptions of economics have had to be drastically revised. As the size of business units has become bigger and bigger, and as wages have come to be increasingly fixed by collective bargaining agreements, business decisions have taken on an increasingly "noneconomic" character. When U. S. Steel, General Motors, or any other large corporation, decides to raise prices, to expand its production facilities, or, as a result of collective bargaining agreements, to raise wages, its actions will affect not only the company's workers, stockholders and customers, but many others who have no direct dealings with the company. Since there is always the danger that when a corporate giant sneezes, the country will catch pneumonia, its actions are of public concern and are under constant public scrutiny. Management can no longer be exclusively concerned with increasing profits, as the classical economists had assumed. It must also consider the social (i. e. "uneconomic") consequences of its acts.

Many of the things which a modern corporation considers essential in order to win public goodwill (such things as air pollution control, philanthropic and educational donations, widespread employment welfare programs and ever-increasing public relations budgets) have no direct relation to the profitability of the business. And yet, paradoxically, without such trimmings few large corporations would be able to stay in business profitably.

Even less is known about the motives which lead people to save and invest. Traditional economic theory, for example, had generally assumed that capital will always be forthcoming at some interest rate. During the depression, however, it was found that businessmen might be unwilling to borrow funds even if the rate of interest were close to zero. And creditors would have been unwilling to invest or lend money even if the

rate of interest were very high. What the role of investor optimism or pessimism is in determining the rate of savings and investments is something about which we know very little, although such studies as those made by Dr. George Katona of the Survey Research Center of the University of Michigan will, no doubt, greatly enlarge our knowledge of the subject.

Of course, it is one thing to find that the old answers are inadequate; it is much more difficult to come up with better ones. Certainly, the debates among economists show that we are nowhere near the goal yet. One thing, however, is clear. Economics, like every other social science, is basically conconcerned with the behavior of human beings. To assume, as some of the great economists of the past have done, that they somehow cease to be human when they look for a job, or buy a new dress, or take out a loan, or engage in any other "economic" activity is nonsense. People, it would seem, are not very much more or less rational when they buy a hat than when they select a mate, a political candidate or a philosophy. More and more, economists are turning to the psychologists and sociologists for answers to these complicated questions.

In spite of their increasing specialization, economists are turning more and more outside their special discipline for the answers they seek. This is an encouraging sign and augurs well for the future of economics. After all, of the great economists, Adam Smith was a philosopher, Malthus a parson, Ricardo a banker, John Stuart Mill a logician and Keynes a mathematician. And even among the professional economists who have spent their lives studying economic phenomena, it is those who, like Marshall, Schumpeter and others, have ventured farthest afield who have made the most notable contributions.

As a result, economics has ceased to be the dry, "dismal science" described by Carlyle a century ago. Instead, it has become a science which seeks to find out more about ourselves and the way we really act in the factory, the office, the home and in the market place. From such knowledge will come a greater awareness of what is and what is not possible in economic life.

What we do with such knowledge, however, is the concern of all of us, and not merely of economists. It will form the concluding subject in this series on the development of man's economic ideas. ■

NEXT MONTH: The contribution of the economist to the age-old problem of adjusting limited resources to unlimited desires

READING REPORT

The Labor Policy of the Free Society. Sylvester Petro. 399 pp. New York: The Ronald Press. $5.00.

•Like other great causes in their time, the union movement has come of age. It should be able, therefore, to accept with good grace this powerful and profound critique of its legal status and the role it plays, for good or ill, in a free society. Dr. Petro has written a remarkable book. Though he aims primarily at clarification—and revision—of our labor laws, his treatment is by no means parochial. For example, the opening section, entitled "The Free Society," provides a broad frame of reference for the main subject matter. This is followed by a review of the evolution of labor law and policy, with a final section devoted to a suggested new labor policy for the United States. The author's proposals will, no doubt, be considered rash by doctrinaire partisans, and courageous by those who are open-mindedly seeking ways to preserve and advance our free institutions.

* * *

Communism and Nationalism in the Middle East. Walter Z. Laqueur. 362 pp. New York: Frederick A. Praeger. $6.50.

•This volume was written and published before Israeli, British and French forces catapulted the Middle Eastern situation into a new phase. Now that the crisis is boiling over, the book's merits of analysis and prediction are particularly impressive. The author has done what seems to be a pioneering job of recounting and analyzing the rise of nationalism and the concurrent emergence and development of Communist intrigue in Egypt, Israel, Jordan, Syria, Lebanon, Iraq and Turkey. The facts lead him to conclusions that are both frightening and enlightening. The likelihood is that a thoughtful reading of these pages by those concerned with the Middle Eastern mess would lead to altered attitudes and more realistic policies. Unfortunately, by the time this comment appears in print new exigencies might very well have pushed aside the opportunity for taking a studied, long-range approach to the essential problems.

* * *

Common Sense Economics. L. Albert Hahn. 244 pp. New York: Abelard-Schuman Limited. $4.50.

•The "common sense" in the title of this book should not lead prospective readers to conclude that they are being offered a popular guide to workaday economic facts. Such is far from the case. The expression is apparently used invidiously, to re-

proach economists holding views opposed to the author's—specifically, the Keynesians. Dr. Hahn is distressed by "the theoretical shortcomings and the practical danger of" contemporary economic policies, particularly the current stress on "effective demand." He says that "the propensity to work, and not the propensity to spend, is the foundation of national income and wealth." While true, this is surely not the whole story. It is difficult to imagine a second-rate role for "effective demand" in our present-day industrial economy, based as it is on a complex network of exchanges. There are many other controversial points in this volume which theorists may find of interest.

* * *

Small Business at the Crossroads. Wilfred Lumer. 81 pp. Washington: Public Affairs Institute. $1.00.

•Compact and factual, this booklet maintains that small businessmen must cooperate with each other in order to survive.

* * *

Why Wages Rise. F. A. Harper. 124 pp. Irvington-on-Hudson: The Foundation for Economic Education, Inc. $1.50.

•The author of this paper-bound volume concerns himself for the most part with simplifying two aspects of his subject: (1) the question of money wages vs. real wages, and (2) the effect of unions on wages. The first topic cannot be explained too often, and laymen will find the handling of it here clarifying and instructive. In connection with the second topic, Mr. Harper advocates repeal of fringe benefits which, he says, are "a serious threat to our progress." Although his observations are interesting, they leave a number of practical questions unanswered.

* * *

Atomic Energy for Your Business: Today's Key to Tomorrow's Profts. Arnold Kramish and Eugene M. Zuckert. 269 pp. New York: David McKay Company, Inc. $3.95.

•Economics, like politics, often makes strange bedfellows. The case in point is that of the scientist and the businessman who, thanks to the splitting of the atom, have become leaders of a new economic revolution. This volume is a sort of "self-help" book, a handy guide to aid men of industry in preparing for the full-scale arrival of the atomic age. But actually, the book is far more substantial than the "pep talk" tone of the title seems to indicate. It includes simplified technical data on atomic physics, details of current industrial applications of atomic knowledge and a discussion of business and political problems as well as of many other related issues. There are also valuable appendices, including "A Dictionary of Atomic Energy." Because of its scope, the book will be of profit not only to businessmen, but to all who are interested in the unfolding social and economic aspects of the atomic age.

* * *

Agriculture in an Industrial Economy. Troy J. Cauley. 191 pp. New York: Bookman Associates. $4.00.

•Whatever the author's intention may have been, this book has, for the most part, the flavor of an exhortation to revive the Brannan Plan. It contains little if anything new in the way of information or argument that is applicable to the agricultural situation. ■

Challenge Quiz

HOW WELL can you do with this true-false quiz? Test your ability to increase your knowledge through reading. Ten correct answers is Excellent; 9 Good; 8, Average. If you do the quiz *before* reading the articles, 6 correct answers is Good. Answers on page 67.

(1) The drought in the Dust Bowl days of the 1930s was the worst natural disaster in the history of the United States.

True ☐ **False** ☐

(2) In order to overcome the inequities due to racial prejudice, we will have to eradicate racial prejudice.

True ☐ **False** ☐

(3) The productivity of the home-building industry now depends on increasing the use of mass-production methods.

True ☐ **False** ☐

(4) By 1975, the gross national product will probably be twice what it is today, thus doubling per capita income.

True ☐ **False** ☐

(5) Interior design is a luxury expense to be indulged in only by big companies.

True ☐ **False** ☐

(6) The United Mine Workers pension fund is the only pension fund in the U. S. to which employees do not contribute.

True ☐ **False** ☐

(7) Western Europe has enough indigenous oil to meet about half its fuel needs.

True ☐ **False** ☐

(8) Expansion plans for the petroleum industry can be flexible because plant and equipment are a relatively small part of total expenditures.

True ☐ **False** ☐

(9) So far, corporate borrowers have not suffered from the tight-money situation.

True ☐ **False** ☐

(10) The legality and purposes of corporation-financed foundations are not yet understood by many stockholders.

True ☐ **False** ☐

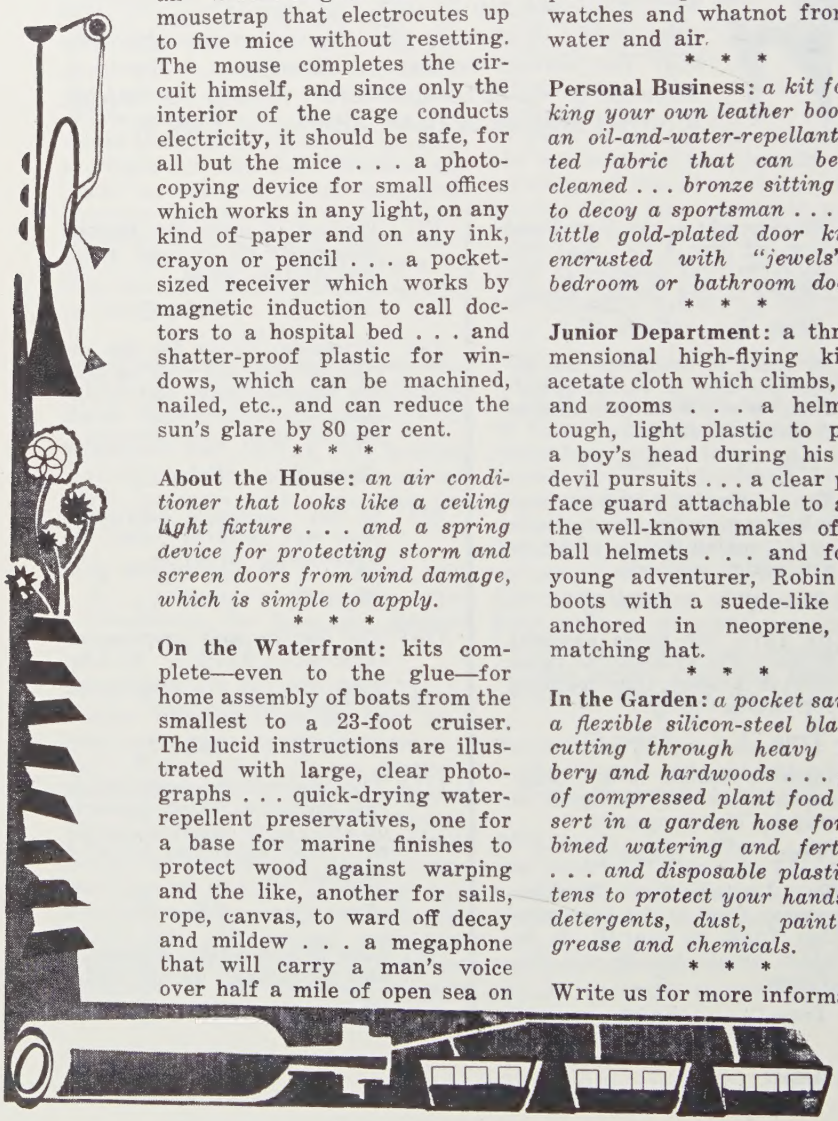
(11) The ten-year-old petrochemicals industry, which converts oil and gas to chemicals, could not have developed without automation.

True ☐ **False** ☐

(12) Like oil and water, economics and psychology do not mix.

True ☐ **False** ☐

Dept. of Better Mousetraps



From the World of Industry: an honest-to-goodness better mousetrap that electrocutes up to five mice without resetting. The mouse completes the circuit himself, and since only the interior of the cage conducts electricity, it should be safe, for all but the mice . . . a photocopying device for small offices which works in any light, on any kind of paper and on any ink, crayon or pencil . . . a pocket-sized receiver which works by magnetic induction to call doctors to a hospital bed . . . and shatter-proof plastic for windows, which can be machined, nailed, etc., and can reduce the sun's glare by 80 per cent.

* * *

About the House: *an air conditioner that looks like a ceiling light fixture . . . and a spring device for protecting storm and screen doors from wind damage, which is simple to apply.*

* * *

On the Waterfront: kits complete—even to the glue—for home assembly of boats from the smallest to a 23-foot cruiser. The lucid instructions are illustrated with large, clear photographs . . . quick-drying water-repellent preservatives, one for a base for marine finishes to protect wood against warping and the like, another for sails, rope, canvas, to ward off decay and mildew . . . a megaphone that will carry a man's voice over half a mile of open sea on a fair day . . . and a water-tight plastic capsule to protect watches and whatnot from salt water and air.

* * *

Personal Business: *a kit for making your own leather boots . . . an oil-and-water-repellant treated fabric that can be dry-cleaned . . . bronze sitting ducks to decoy a sportsman . . . and a little gold-plated door knocker encrusted with "jewels" for bedroom or bathroom door.*

* * *

Junior Department: a three dimensional high-flying kite of acetate cloth which climbs, glides and zooms . . . a helmet of tough, light plastic to protect a boy's head during his daredevil pursuits . . . a clear plastic face guard attachable to any of the well-known makes of football helmets . . . and for the young adventurer, Robin Hood boots with a suede-like finish anchored in neoprene, with matching hat.

* * *

In the Garden: *a pocket saw with a flexible silicon-steel blade for cutting through heavy shrubbery and hardwoods . . . pellets of compressed plant food to insert in a garden hose for combined watering and fertilizing . . . and disposable plastic mittens to protect your hands from detergents, dust, paint, soil, grease and chemicals.*

* * *

Write us for more information.■